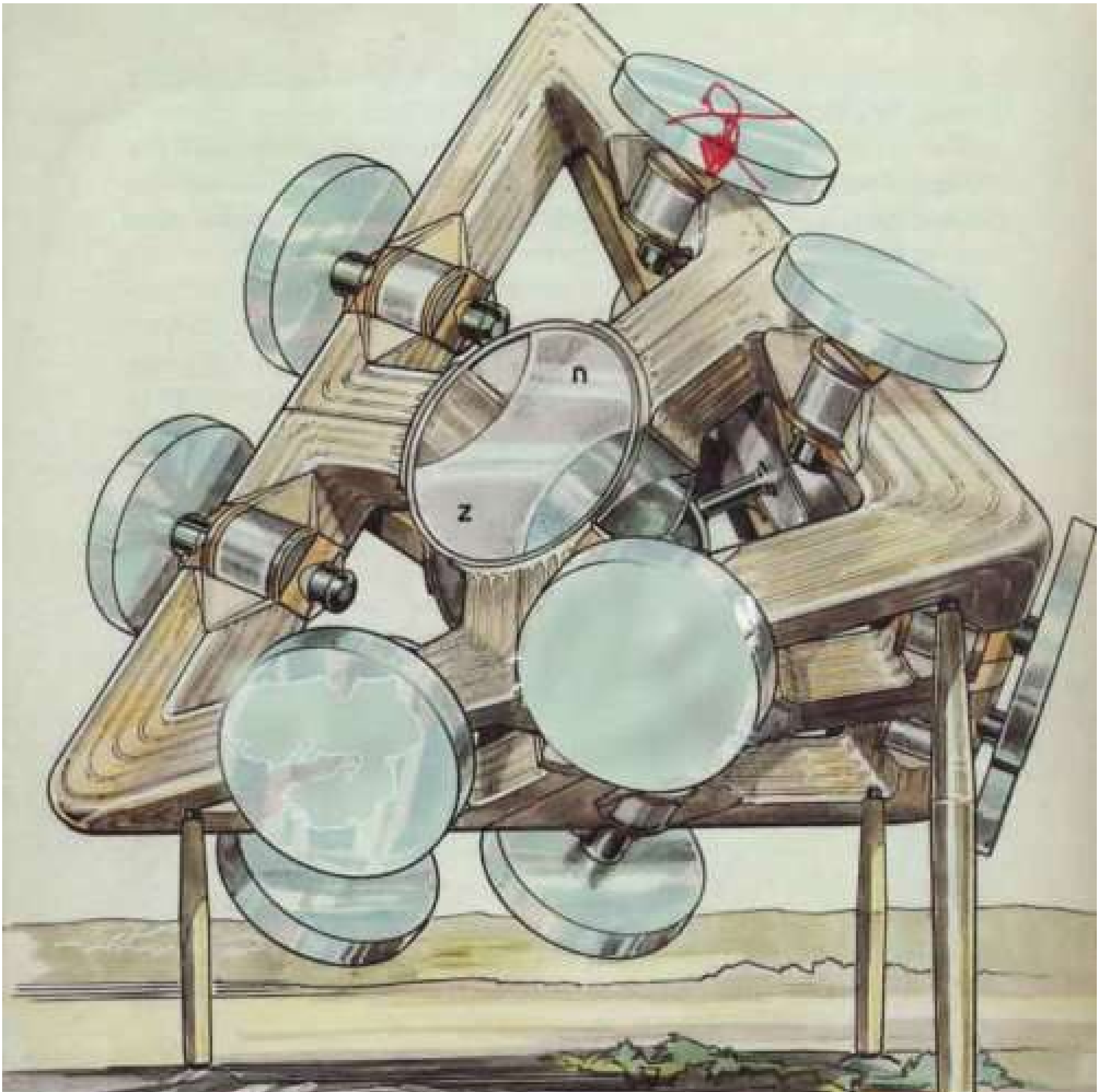
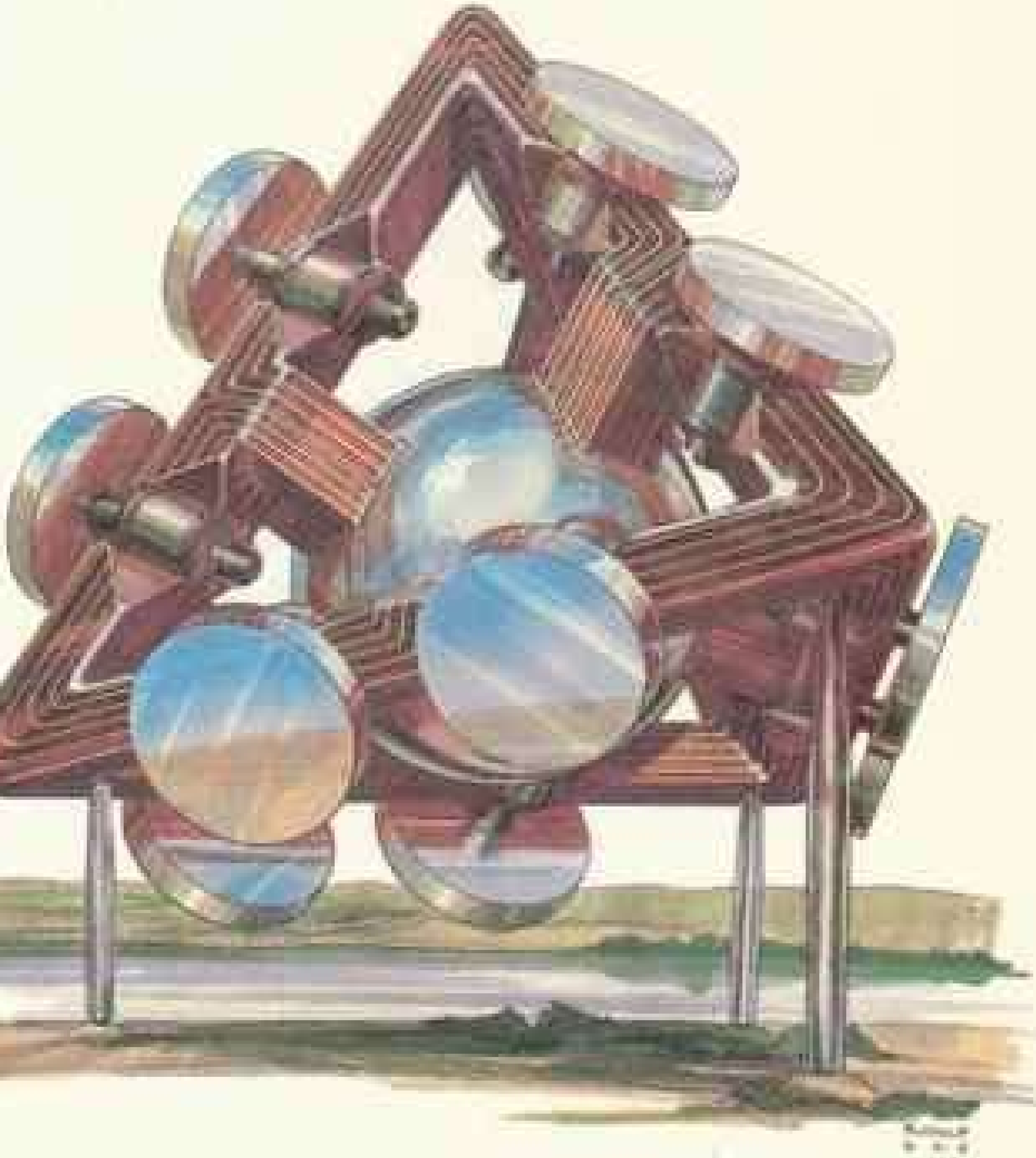

n
z

De universele schepping

Het draagveldparadigma



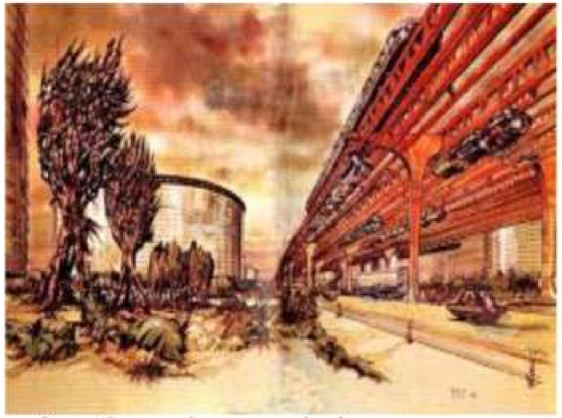
Stefan Denaerde

Meet The largans!

Typical largan

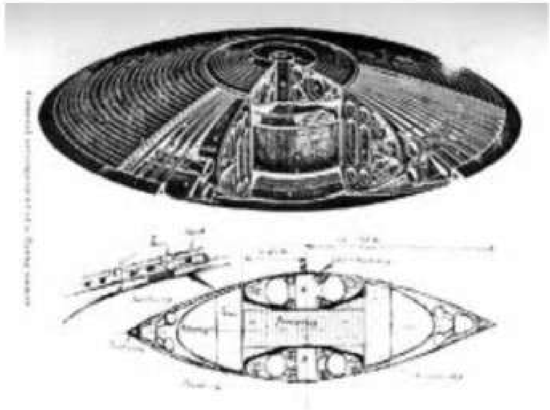
largan gets into photo
without being seen at
the time photo was taken!

largan society and
transportation infrastructure
of housing units



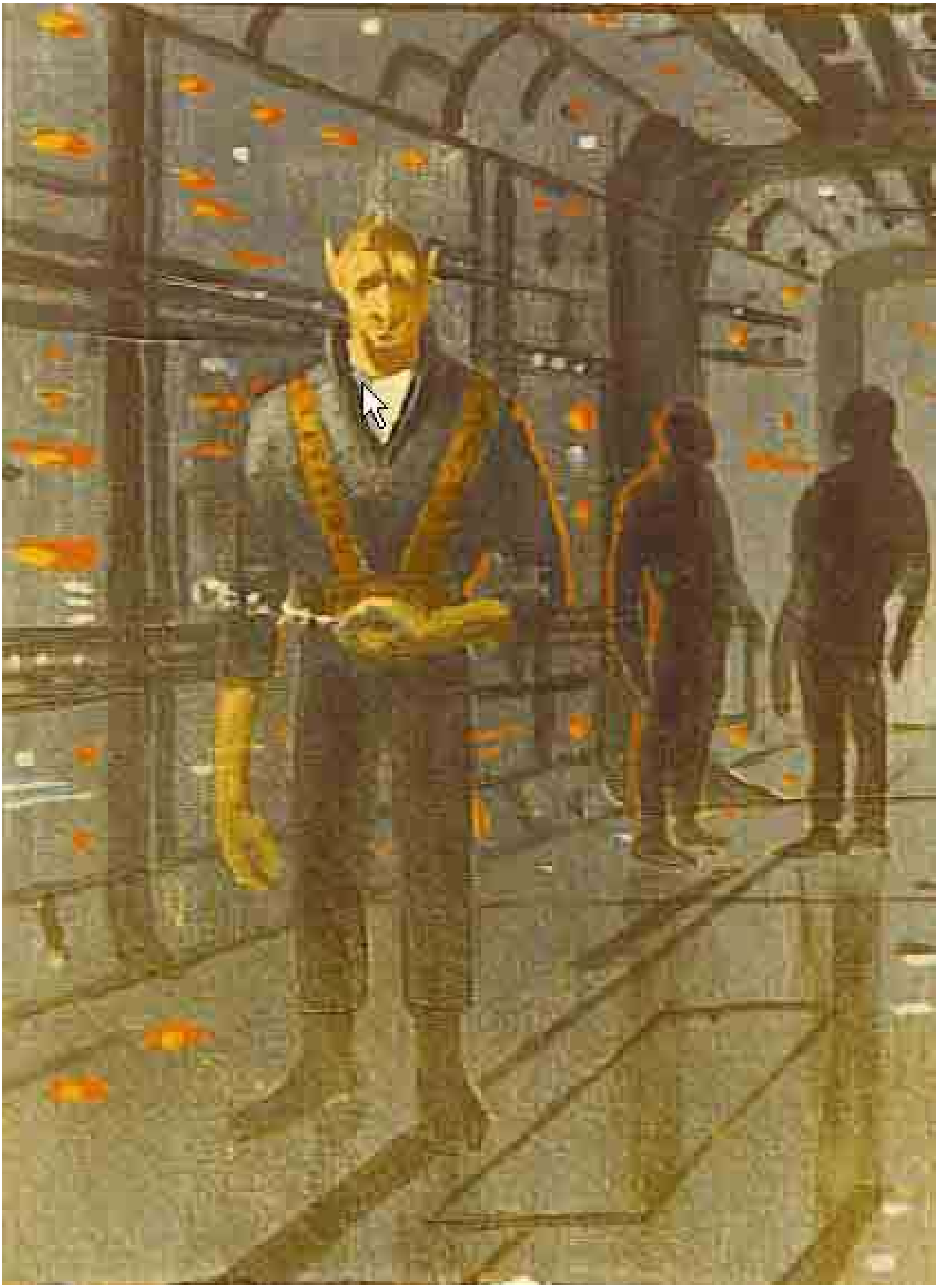
Another view and close up
of cylinder which houses 10 people each!

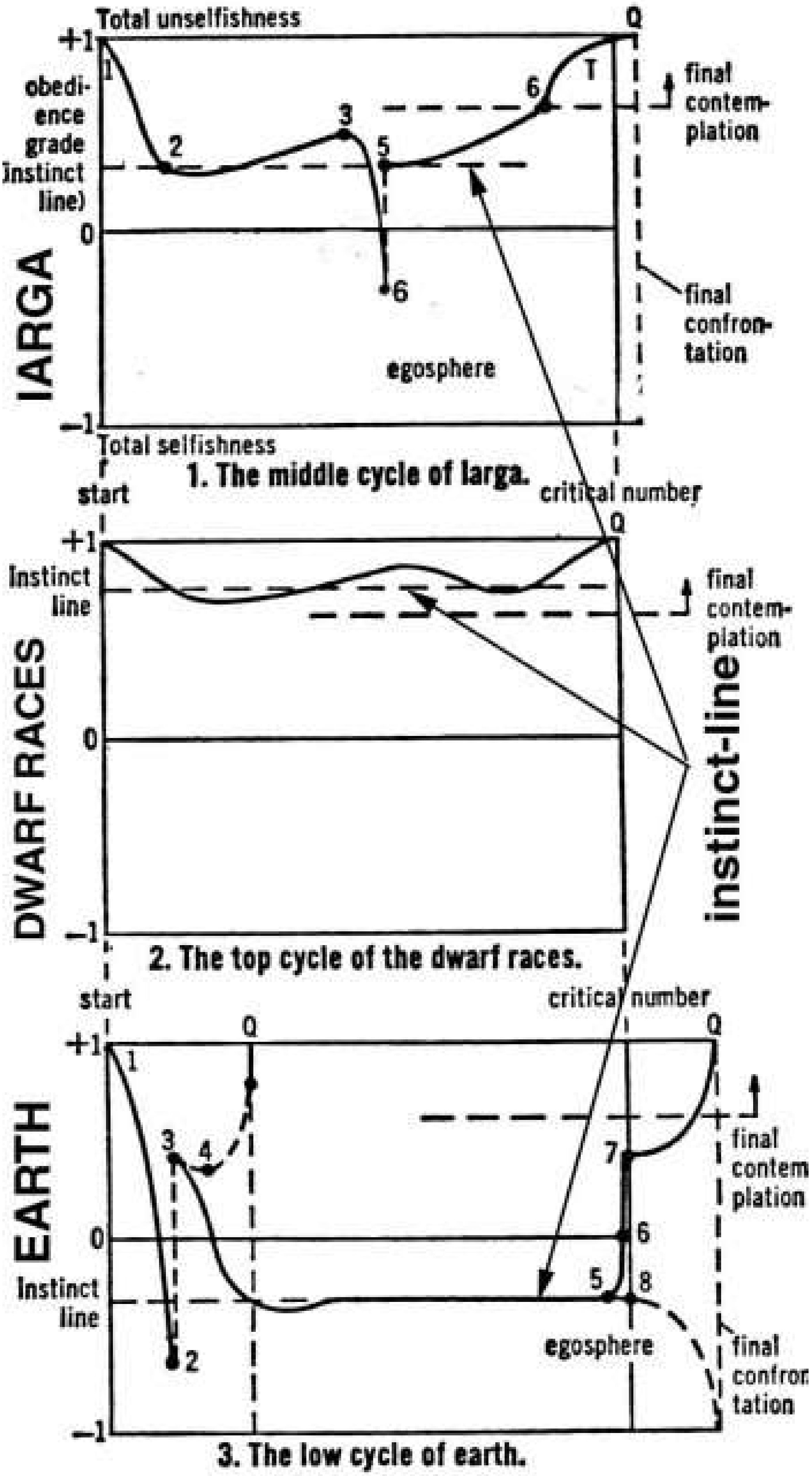
From Inside The Control Room



The blue print of a Sun wheel
which holds 10,000 people as well


Rune Øverby 2004

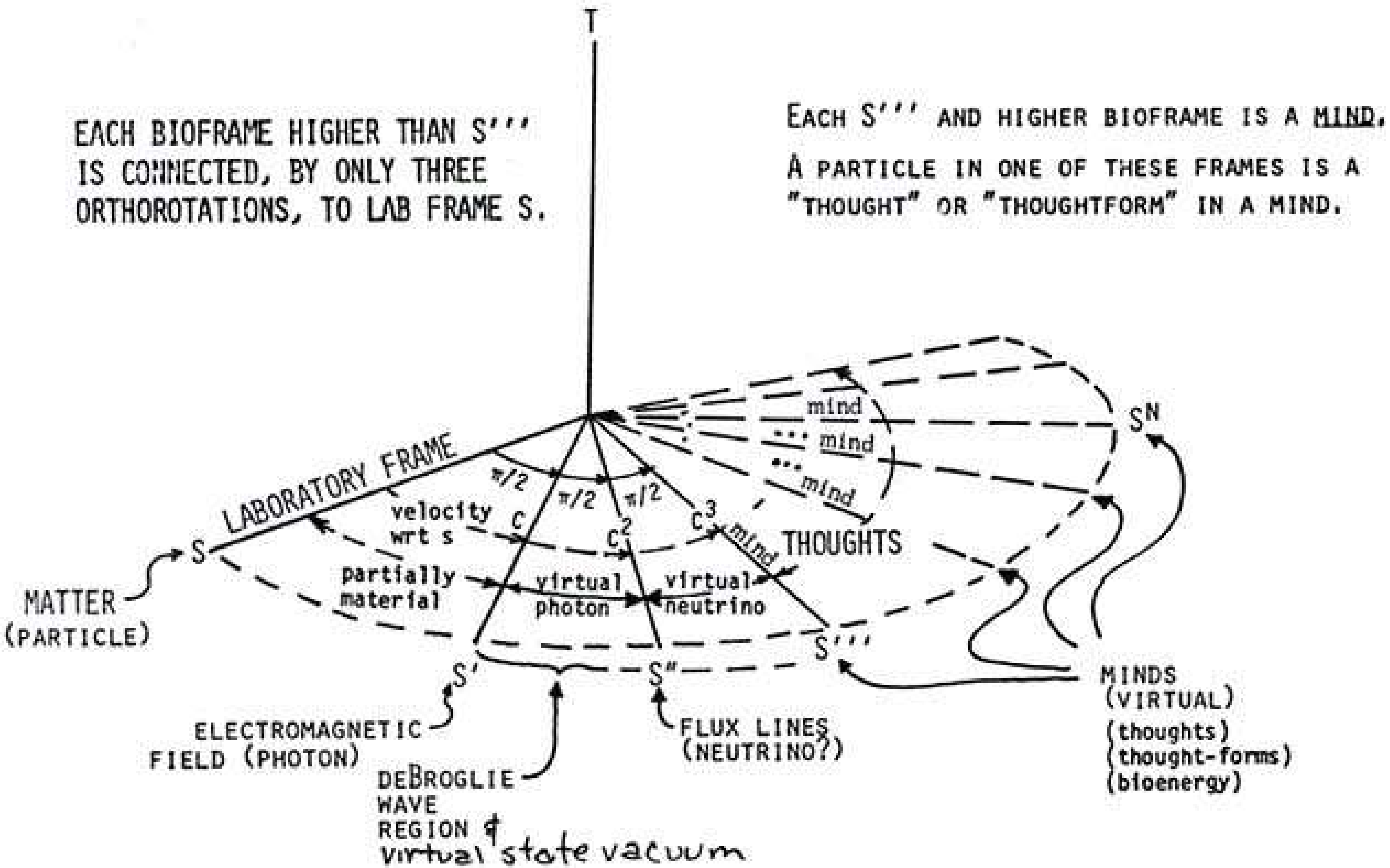


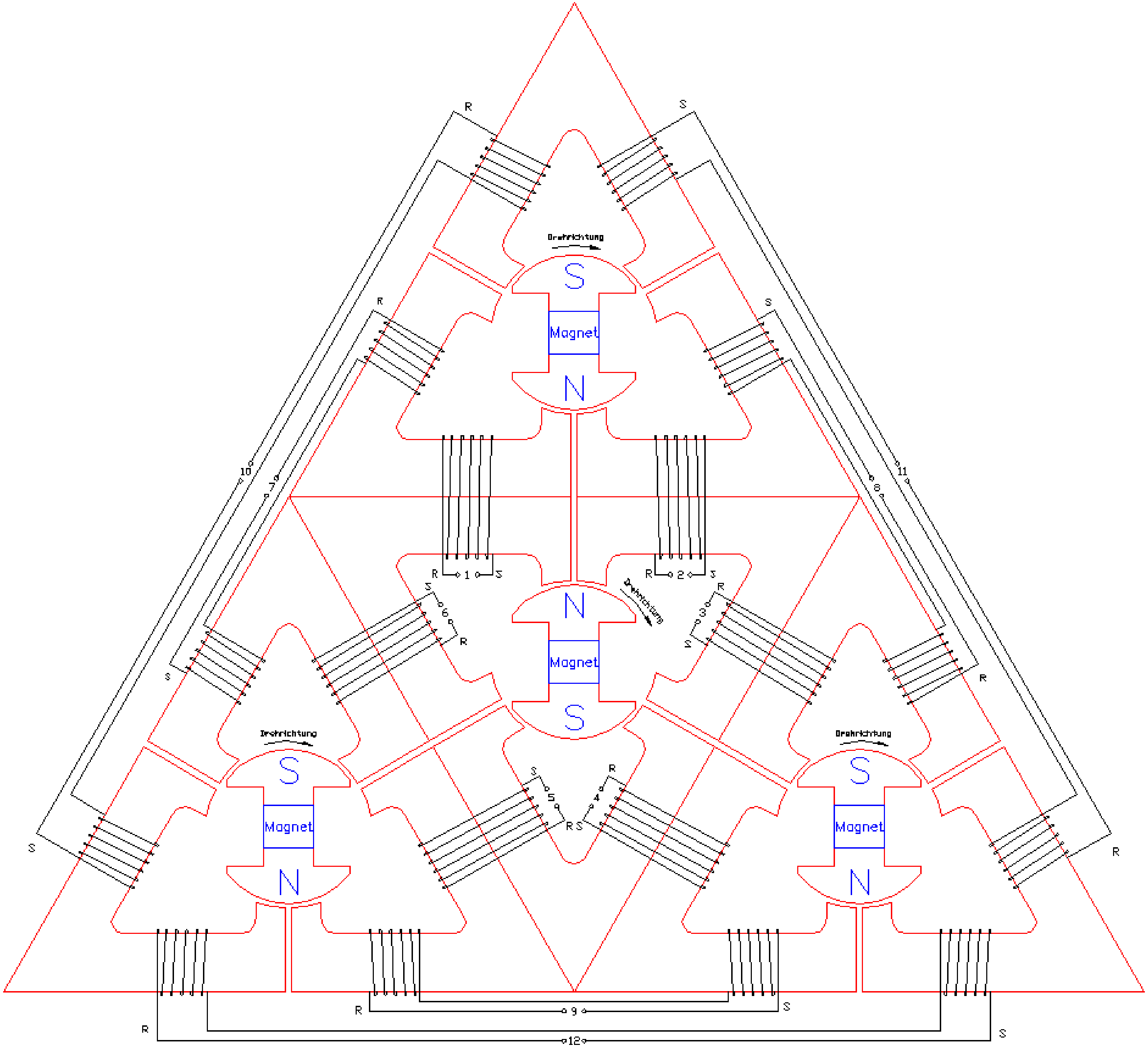


1. The middle cycle of Iarga.

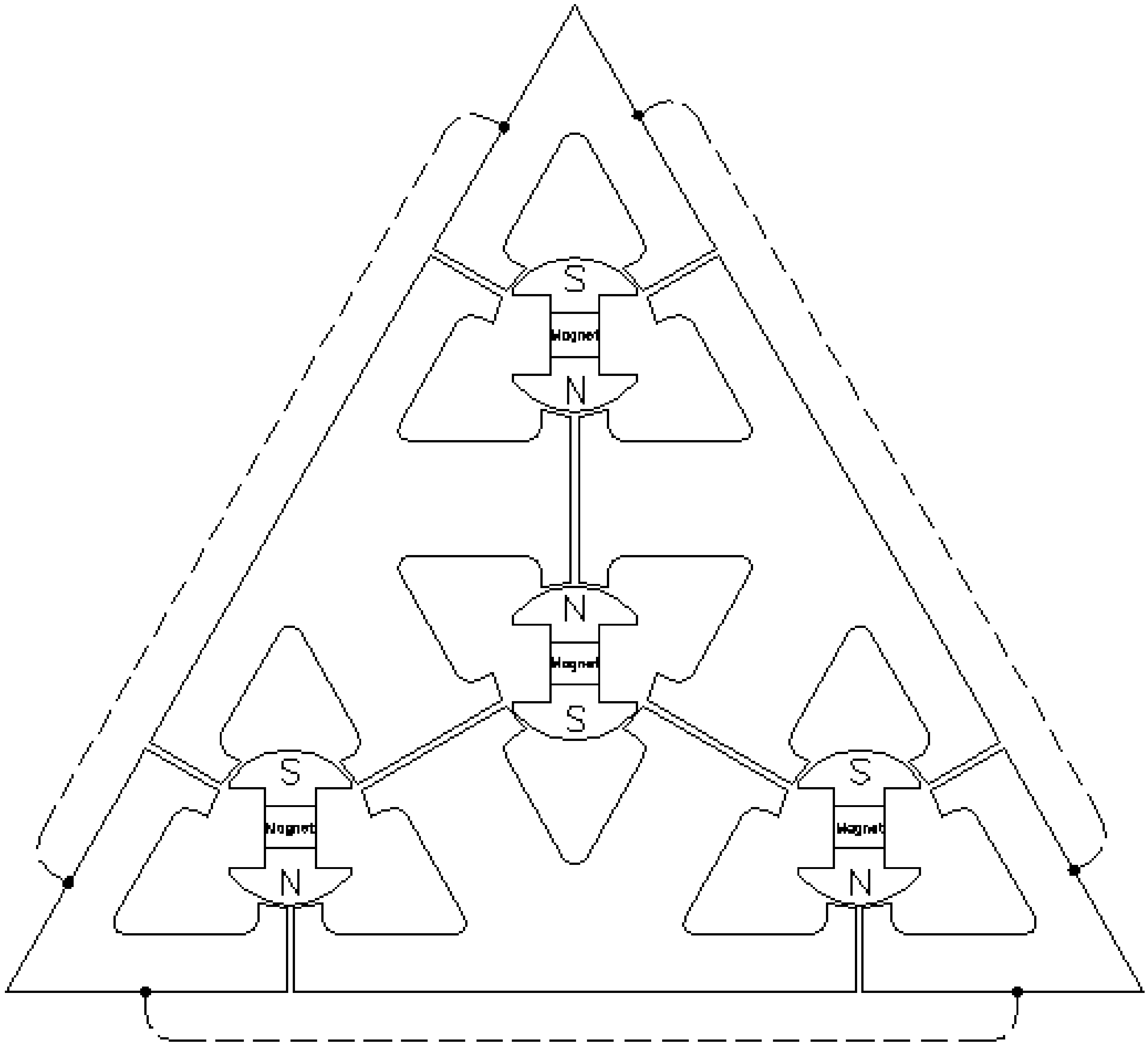
2. The top cycle of the dwarf races.

3. The low cycle of earth.


EACH BIOFRAME HIGHER THAN S''' IS CONNECTED, BY ONLY THREE ORTHOROTATIONS, TO LAB FRAME S.
EACH S''' AND HIGHER BIOFRAME IS A MIND.
A PARTICLE IN ONE OF THESE FRAMES IS A "THOUGHT" OR "THOUGHTFORM" IN A MIND.
T
LABORATORY FRAME
velocity wrt s
π/2
π/2
π/2
C
C^2
C^3
mind
mind
mind
mind
S^N
THOUGHTS
S
MATTER (PARTICLE)
partially material
virtual photon
virtual neutrino
S'
S"
S'''
ELECTROMAGNETIC FIELD (PHOTON)
DEBROGLIE WAVE REGION & virtual state vacuum
FLUX LINES (NEUTRINO?)
MINDS (VIRTUAL)
(thoughts)
(thought-forms)
(bioenergy)



Drehrichtung
S
Magnet
N
S
Magnet
N
S
Magnet
N
S
Magnet
N


S
Magnet
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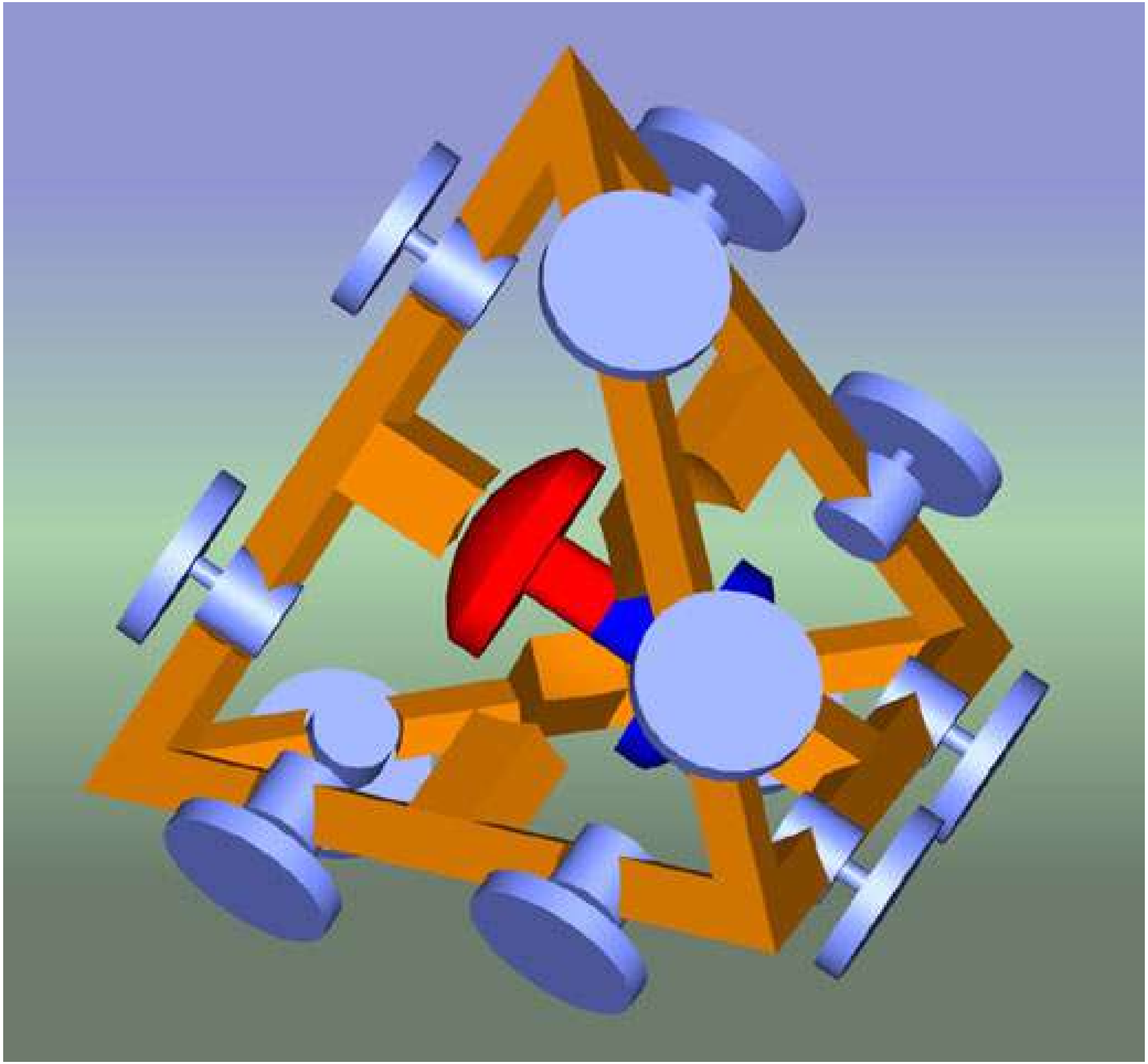
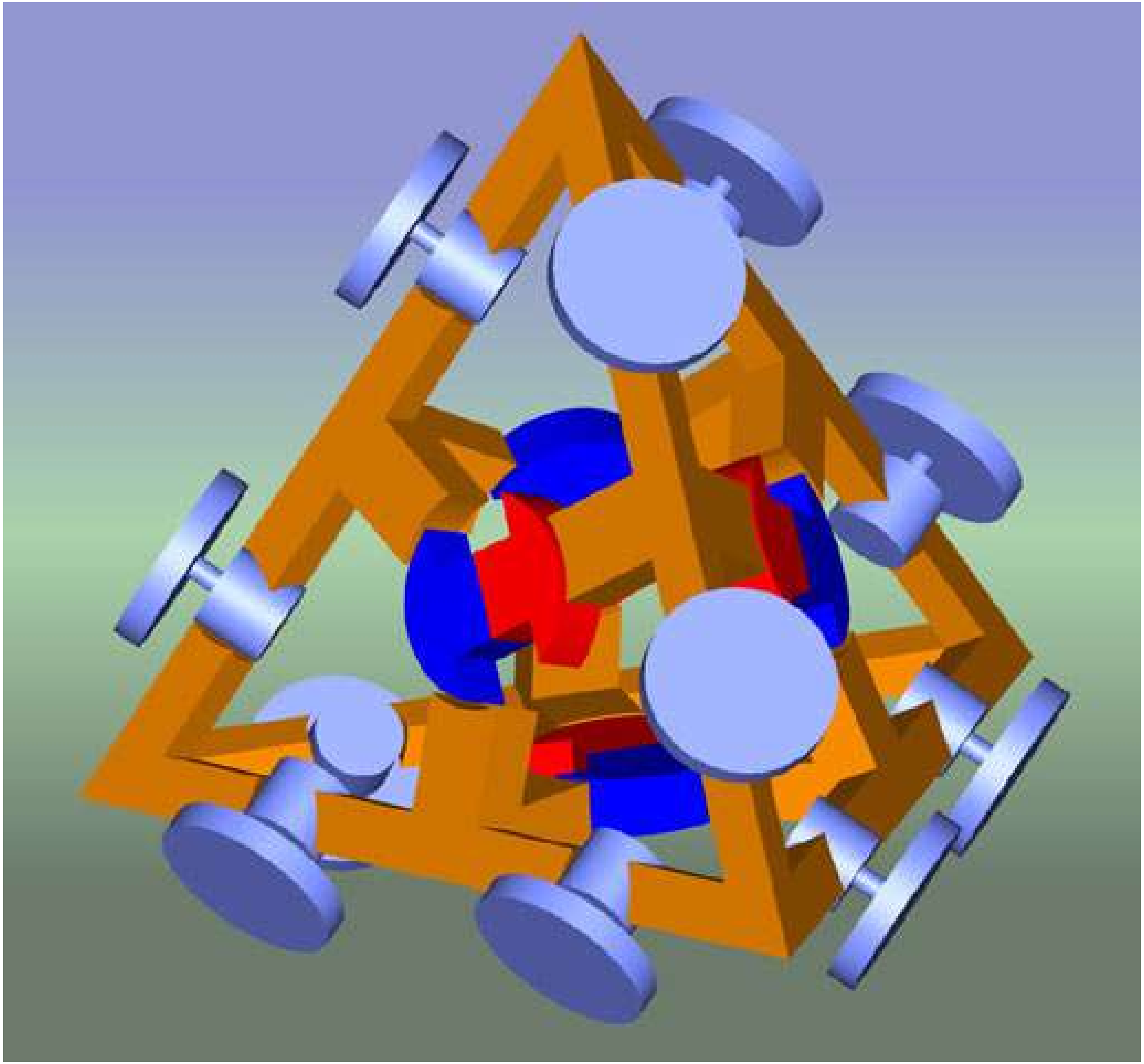
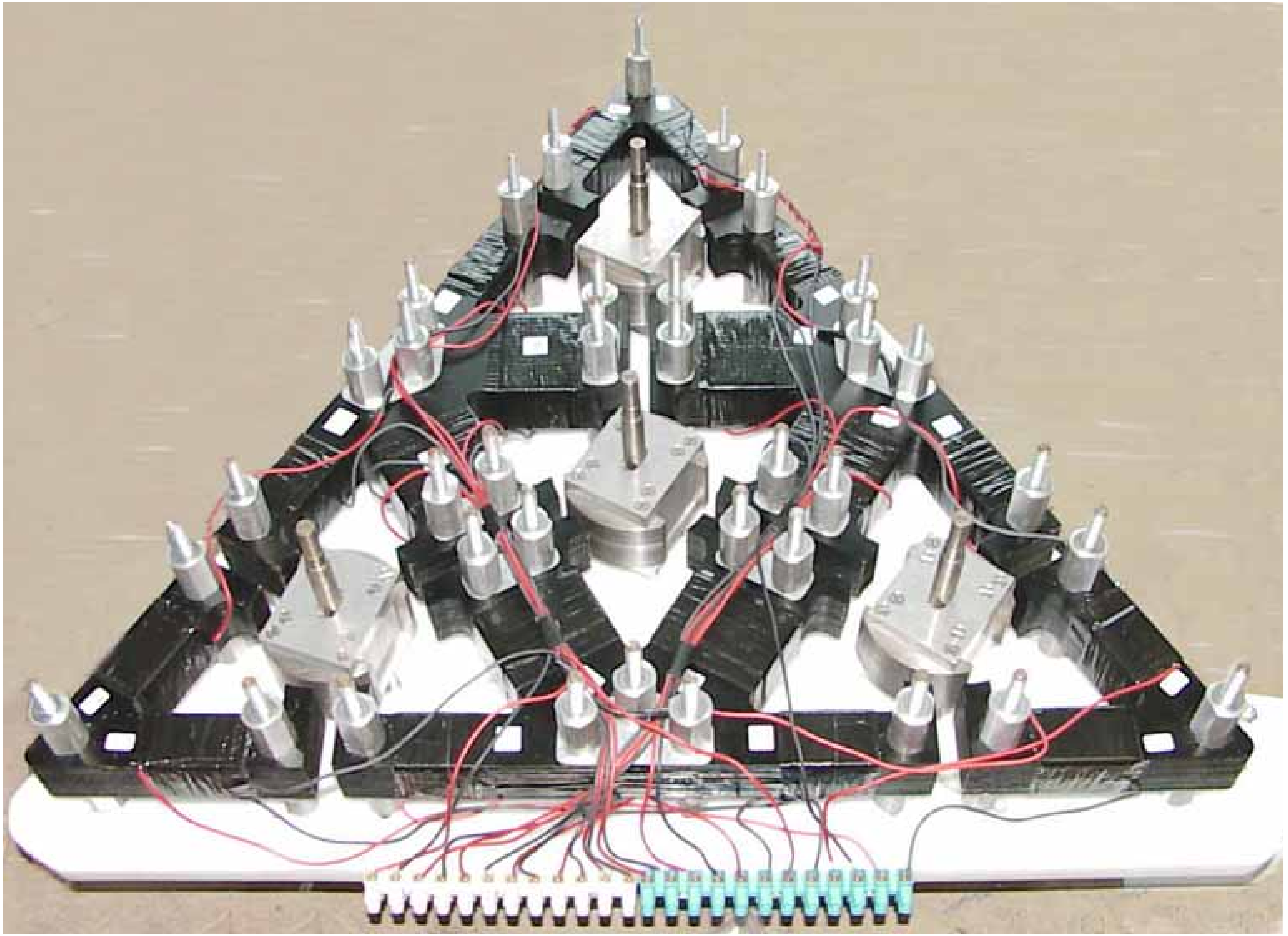
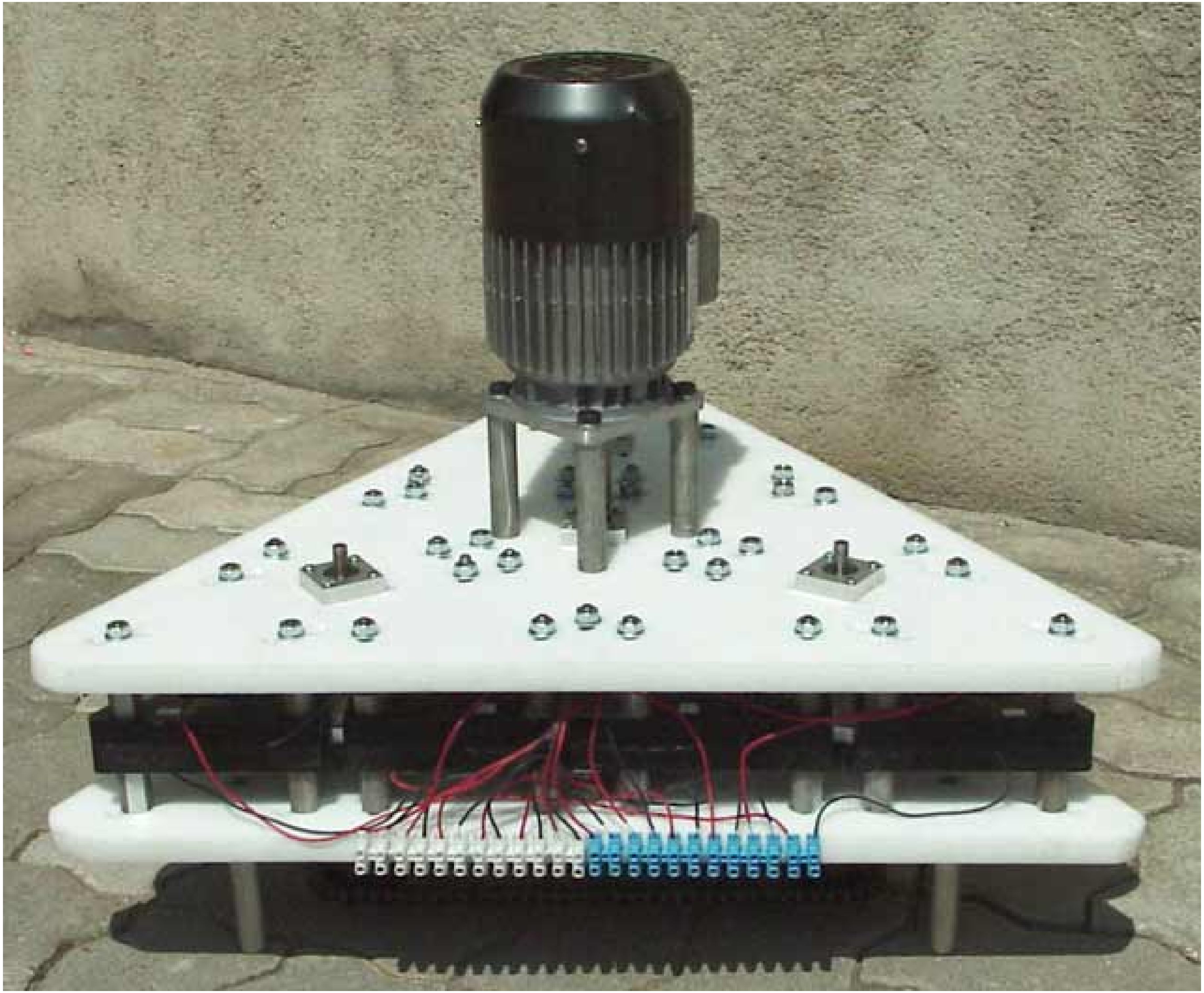
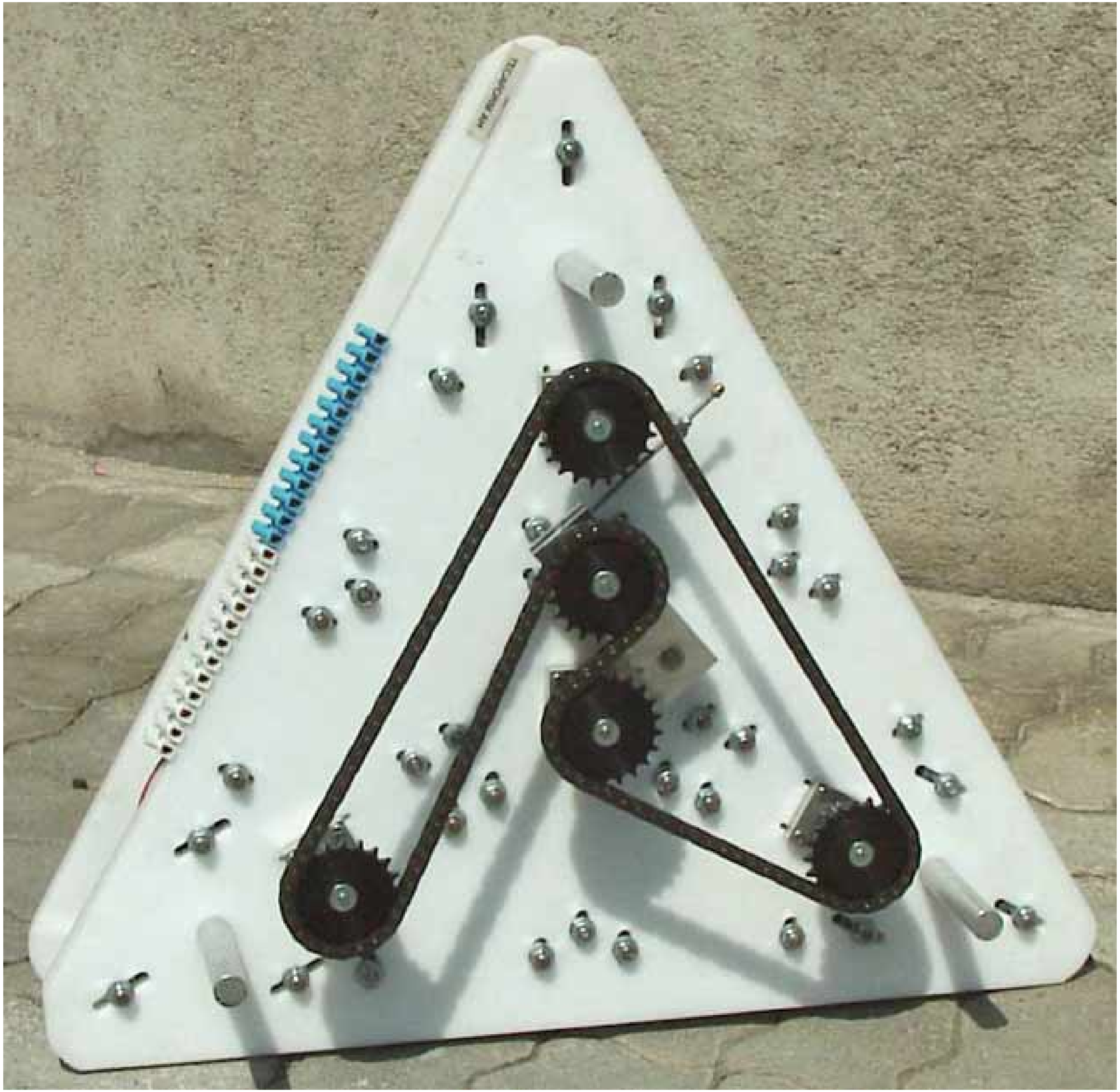


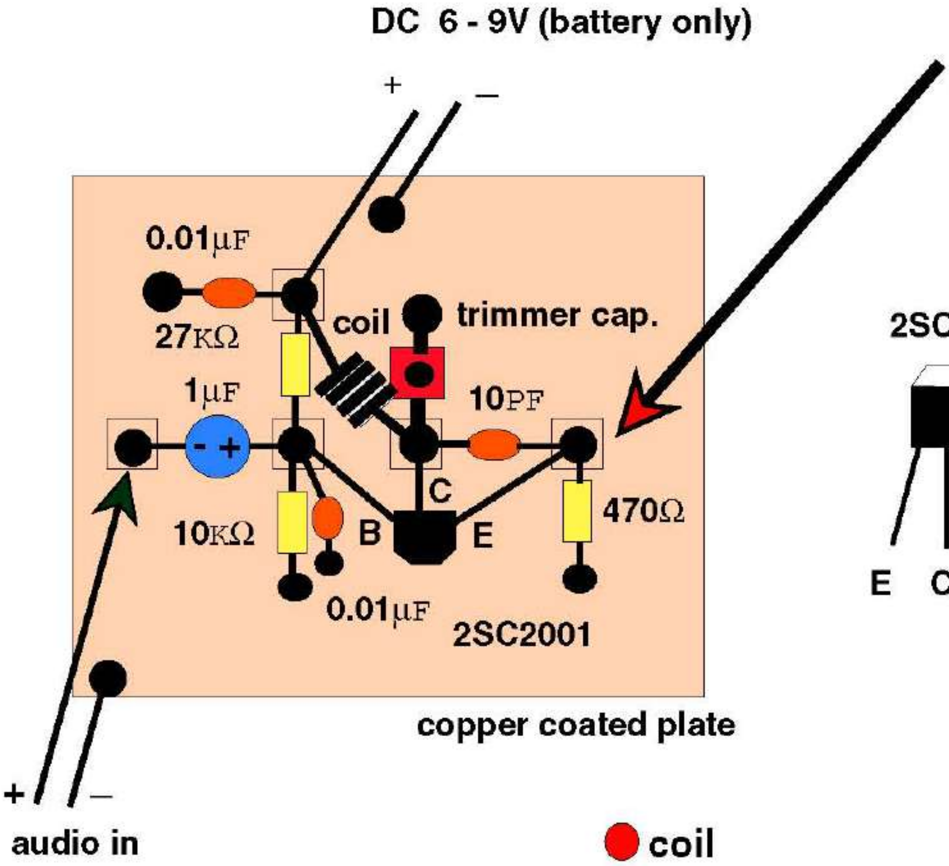


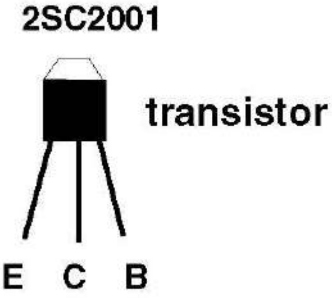






Making the simplest Transmitter





- **soldered point:**

● : direct to the ground

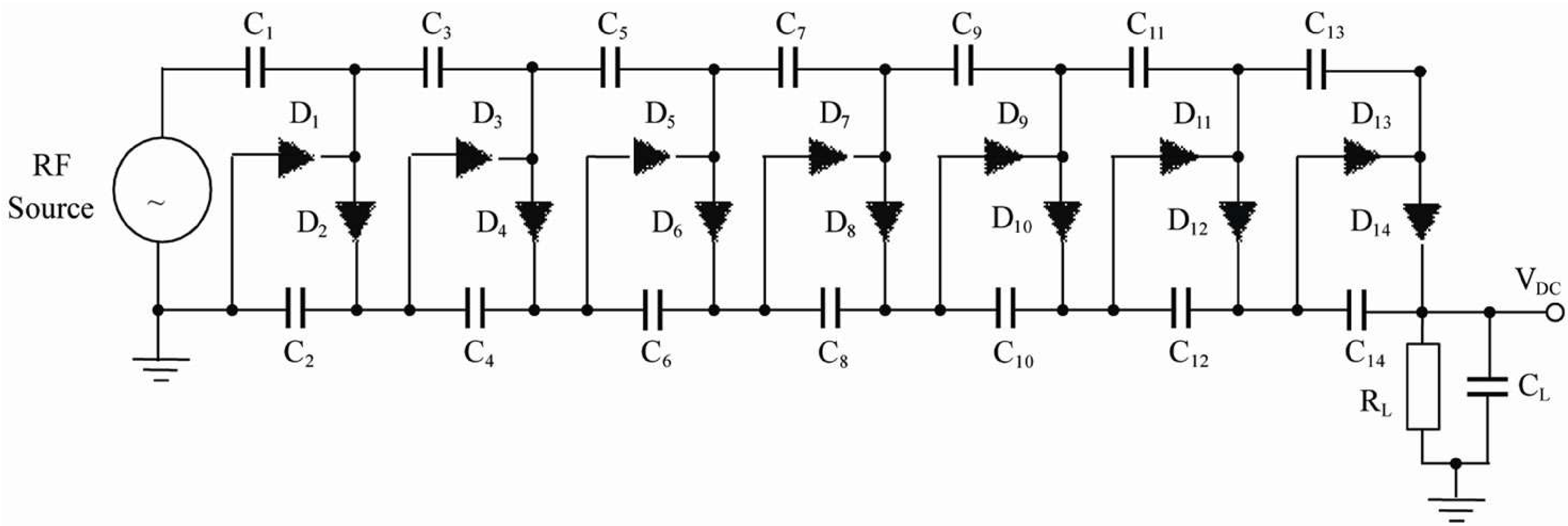
● : insulated from the ground

- **coil**

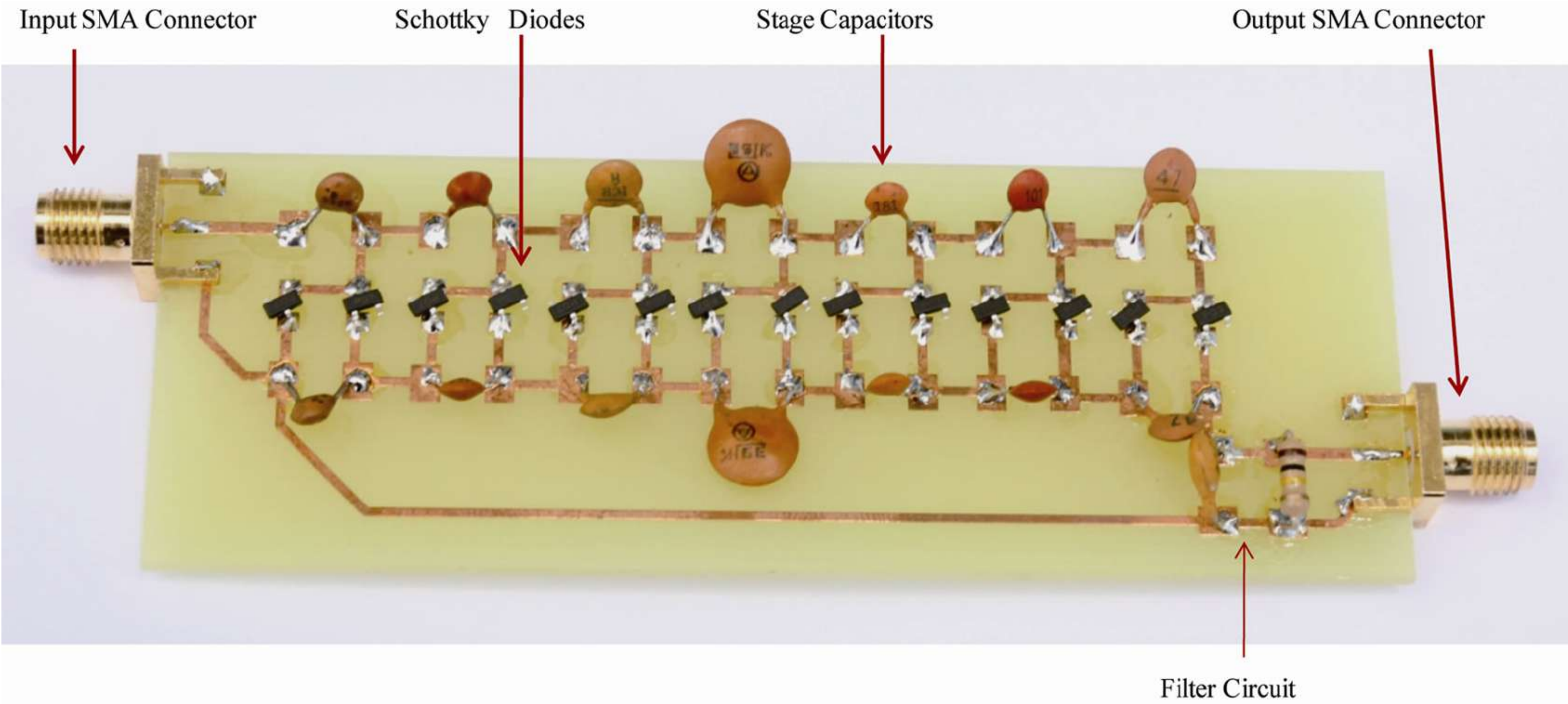
  3 - 4 turns by coated 0.8 mm wire

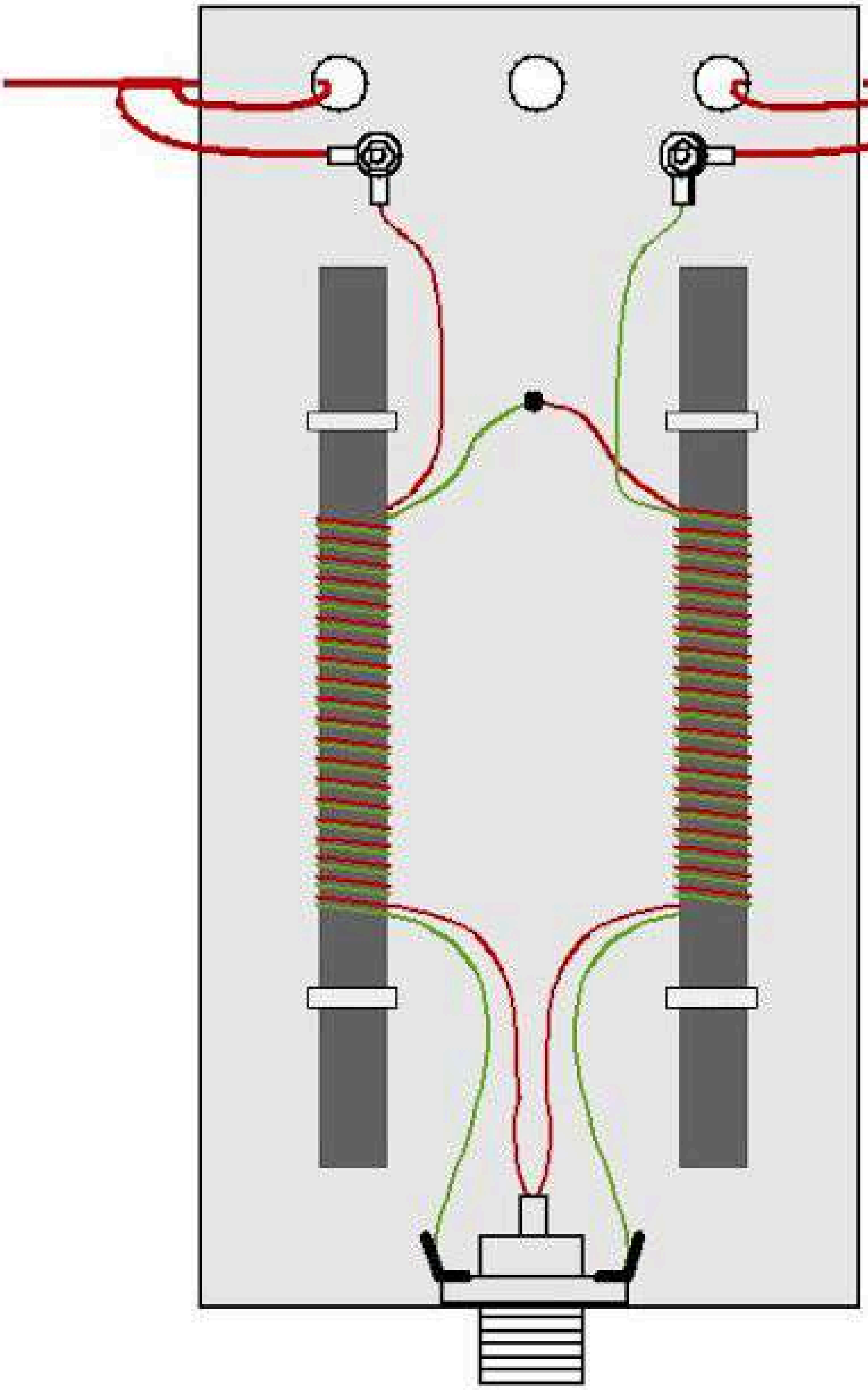
- **registers**
  - 470 Ω *(yellow-violet-brown)*
  - 10K Ω *(brown-black-orange)*
  - 27K Ω *(red-violet-orange)*
- **capacitors**
  - 10 PF
  - 0.01 μF *(103)*
  - 1 μF
- **trimmer capasitor 20PF**

2005-03-16 by Tetsuo Kogawa



RF
Source
~
C1
C3
C5
C7
C9
C11
C13
D1
D3
D5
D7
D9
D11
D13
D2
D4
D6
D8
D10
D12
D14
C2
C4
C6
C8
C10
C12
C14
VDC
RL
CL

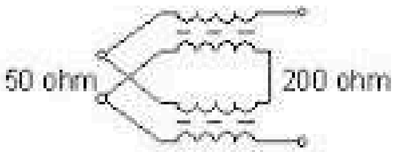

Input SMA Connector
Schottky Diodes
Stage Capacitors
Output SMA Connector
Filter Circuit



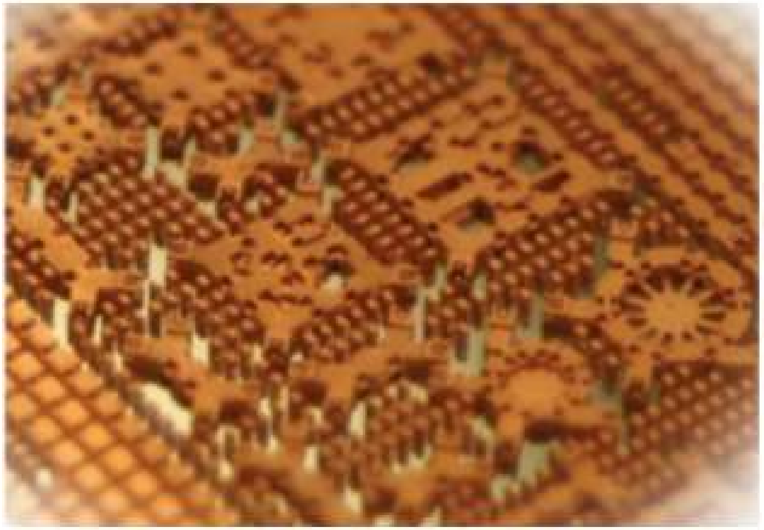
Windom balun
for kW range
OH7SV 2004-08-22

Surplus ferrite rod
from OH7XE
AL=47nH/turn
l=160mm, d=9mm

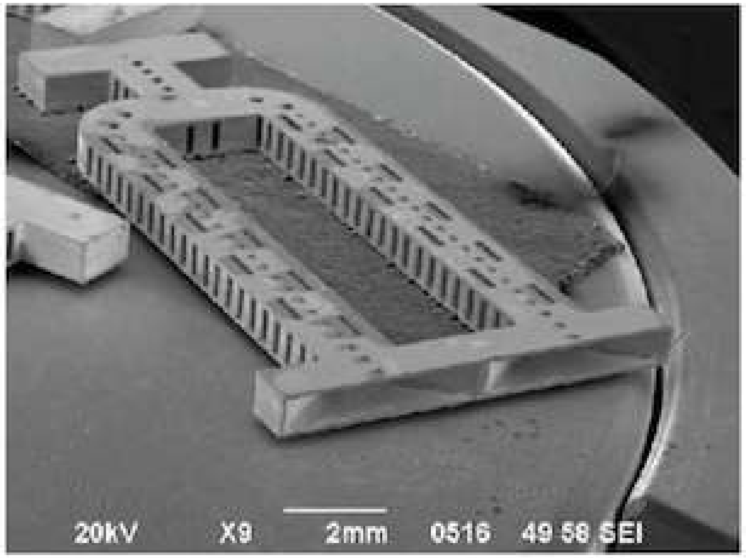
2 x 20 turns, 1mm cu
parallel winding
(not twisted)

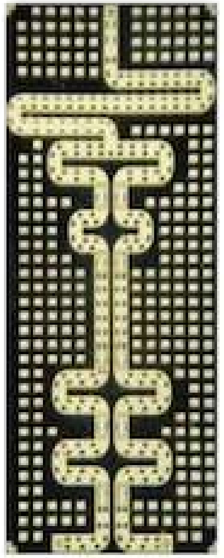


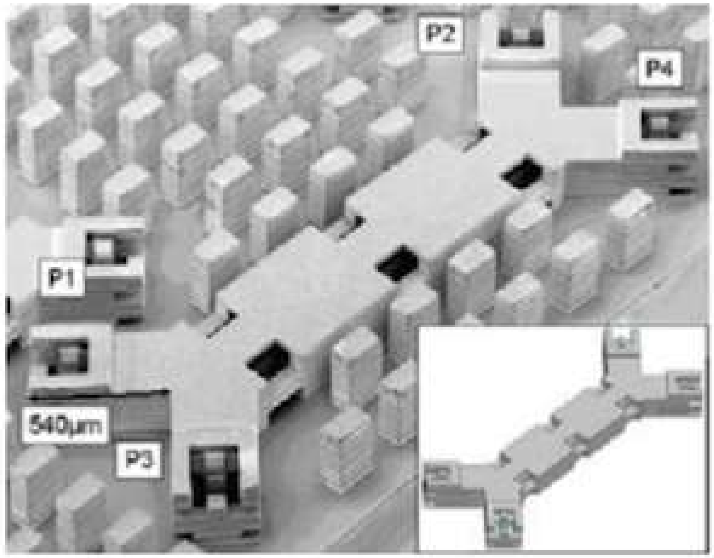
Three-dimensional micro-fabricated microwave and millimeter-wave circuits and antennas



Another active area of research has been in collaboration with Nuvotronics LLC (DAPRA and NASA) in the area of wafer-scale microfabricated coaxial lines and passive and active coaxial-based components. The advantages of these lines, fabricated by Nuvotronics, is extremely low loss into the millimeter-wave range, extremely good isolation of neighboring lines enabling high density circuits, broad bandwidth and low dispersion, and amenability for integration with passive and active surface-mount components. Our research goals are focused on design of completely new components in this technology, in order to push the bandwidth, power handling and flexibility for various communications and sensing applications. Some results include 22:1 bandwidth impedance transformers and 22:1 bandwidth power divider networks which operate up to millimeter-wave frequencies.



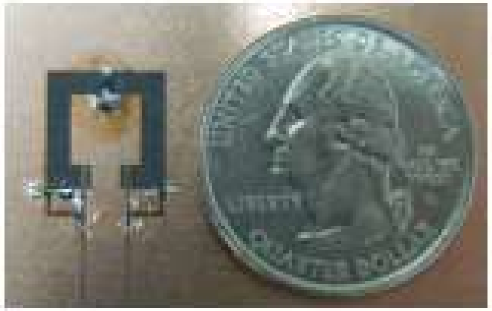


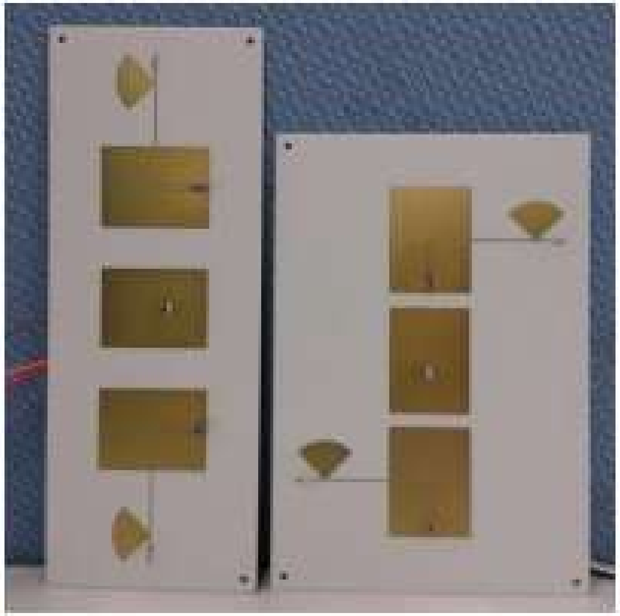


Wireless powering for battery-less sensors

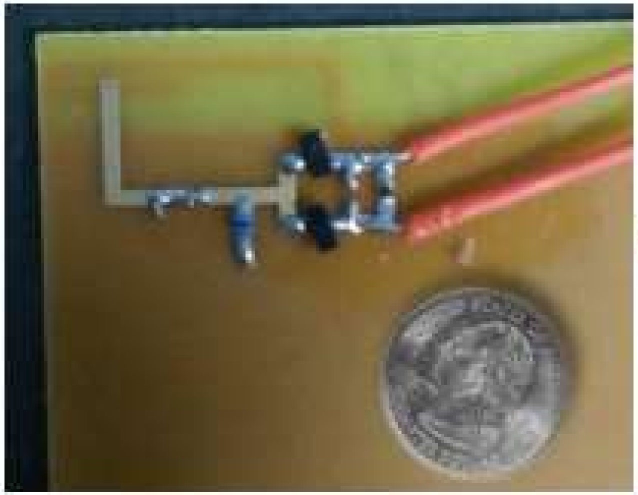
An area in which we have promising initial results, as well as a best paper award, is in RF energy harvesting and wireless powering of wireless sensors. This is an area with a strong collaboration with the Colorado Power Electronics Center (CoPEC), with strengths in low-power management design. The work resulted in a comprehensive patent application and licensing of the IP by several companies, e.g. Cymbet. The applications are for low-maintenance batteryless sensors for manufacturing environments, structural monitoring, and healthcare. We have shown that broadband statistically varying randomly polarized background microwave radiation can be efficiently rectified and the stray energy stored over time for useful electronic applications. We have also shown that FCC-compliant low-power transmitters can be strategically placed to enable constant very low power density energy delivery and storage. Our goals related to this research are to improve the integration of our current hybrid demonstrations, and to expand the circuit-antenna library so that we can address many concrete applications with the best-suited architecture.

- *Reconfigurable antennas*



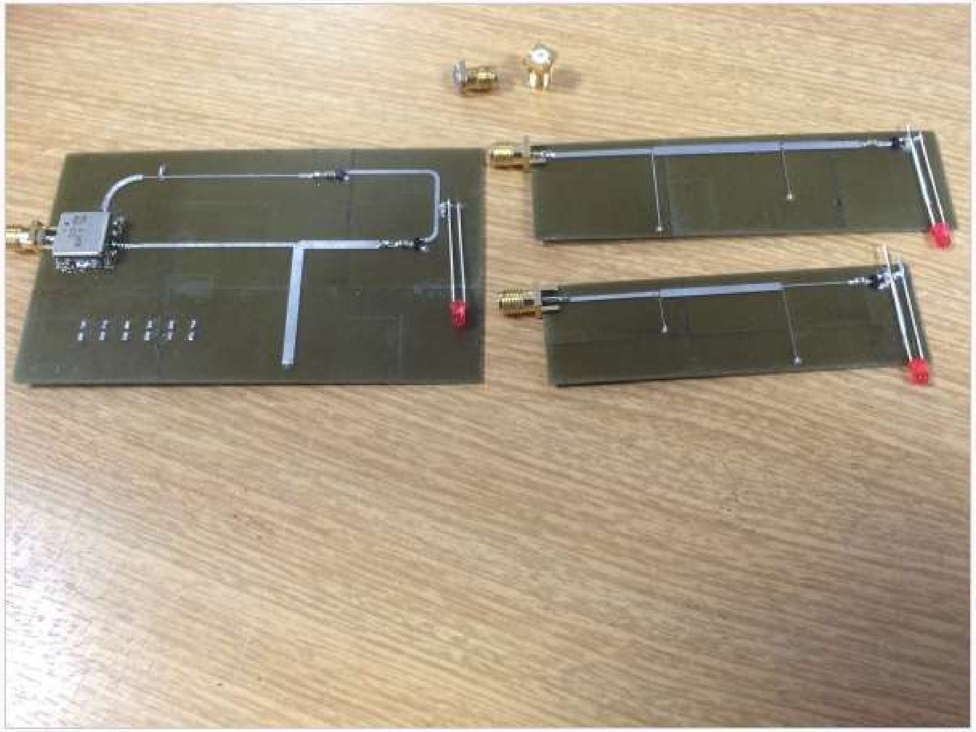


- RF *energy harvesting*

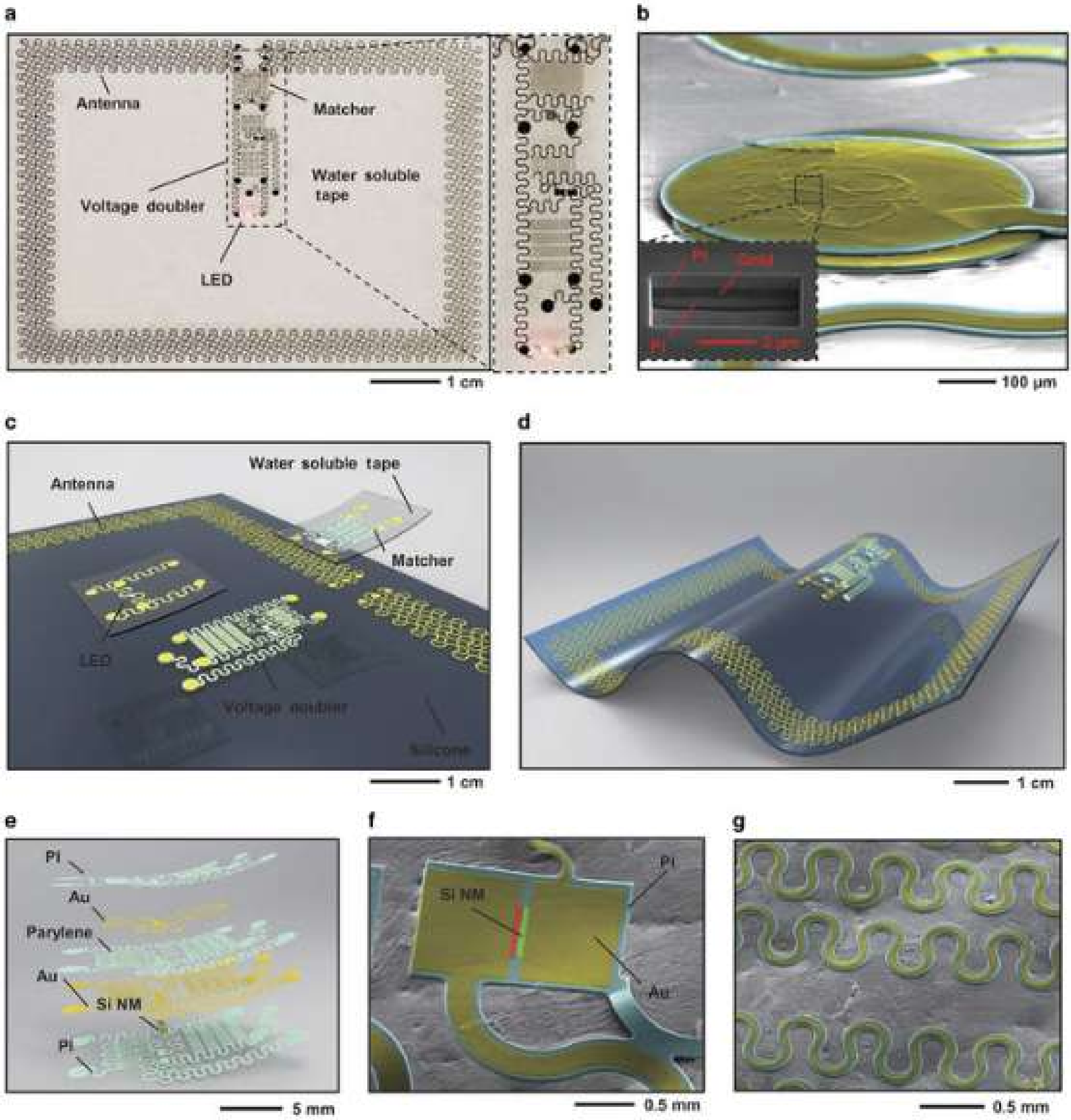


Rectifier Circuit

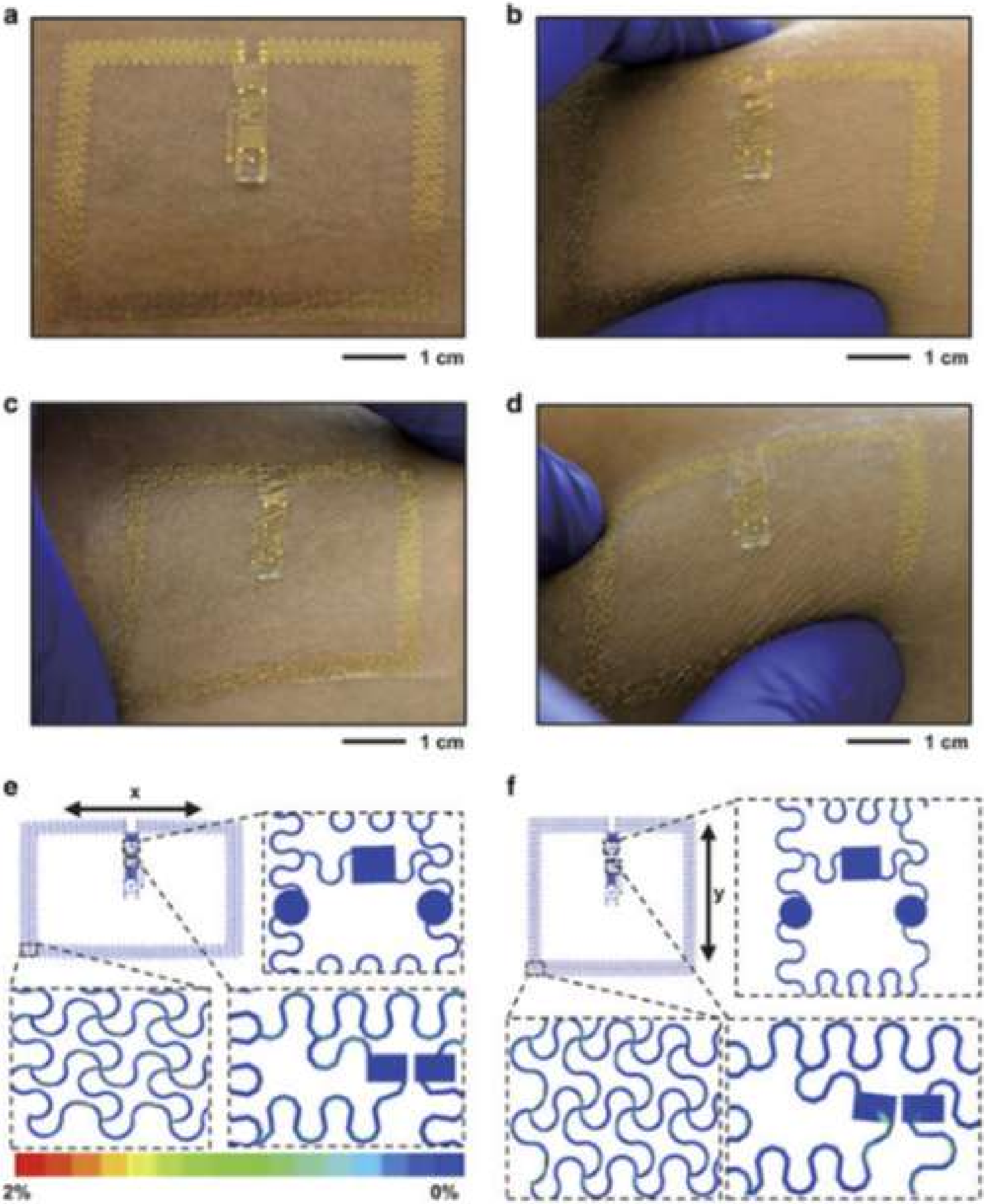
A RF-to-DC rectifier circuit converts collected RF energy to DC electricity. The designed circuit is a half wave voltage doubler circuit with a impedance matching network that matches the rectifier's input impedance to 50Ohms for maximum power transfer or minimum power reflection.



3 prototypes of rectifier circuit

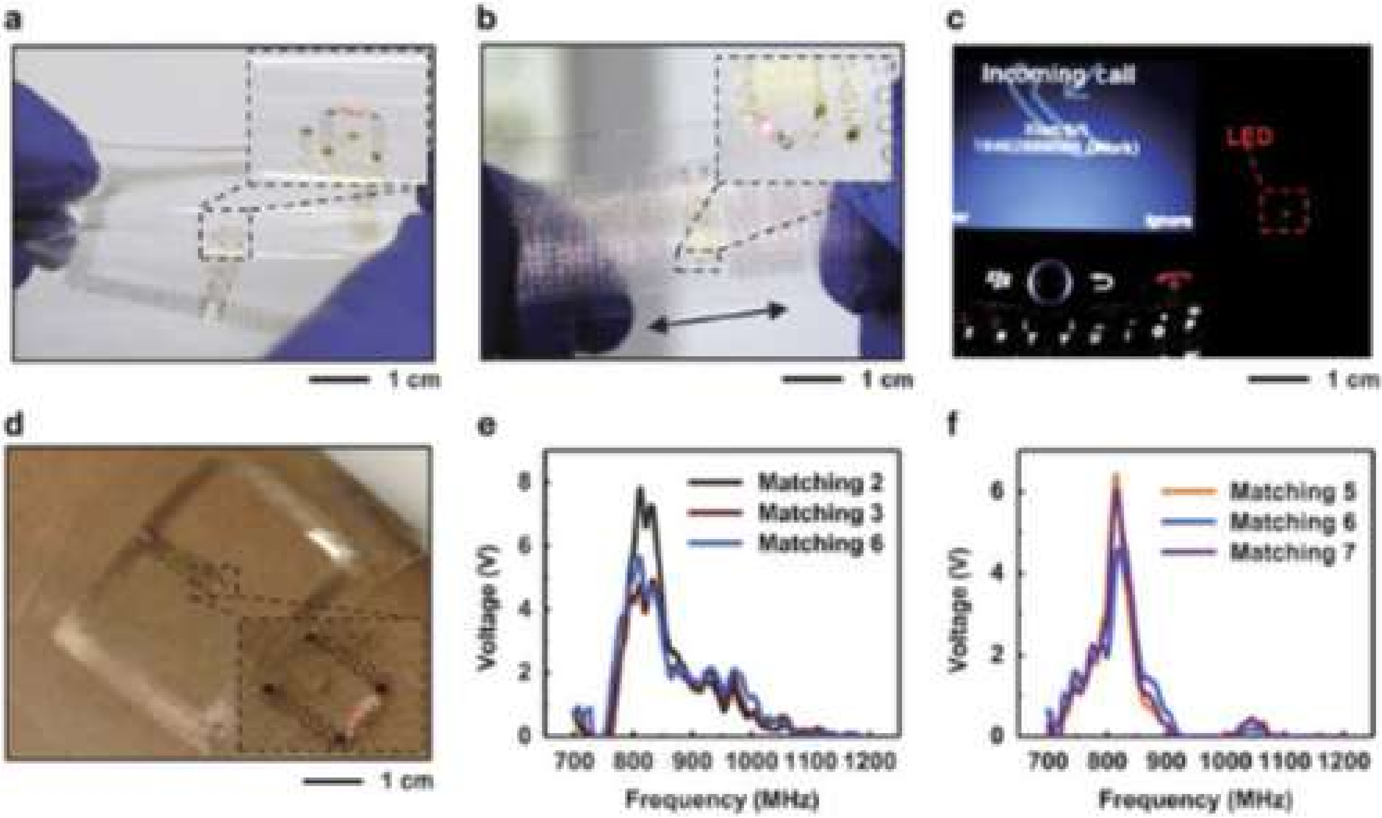


Schematic illustration and implementation of a modularized epidermal RF system for wireless power transfer. (**a**) Image of device while operating an integrated LED via power delivered by a remote RF source (15 W, 1.5 m). The loop antenna, formed with serpentine conductive traces in a square layout, spans the perimeter. The inset on the right highlights the collection of active components. (**b**) Top view SEM image of aligned gold pads whose



Mechanics of an epidermal RF system. Pictures of an epidermal RF system integrated on the skin (**a**) in its native state, (**b**) during compression by pinching (**c**) under uniaxial stretch and

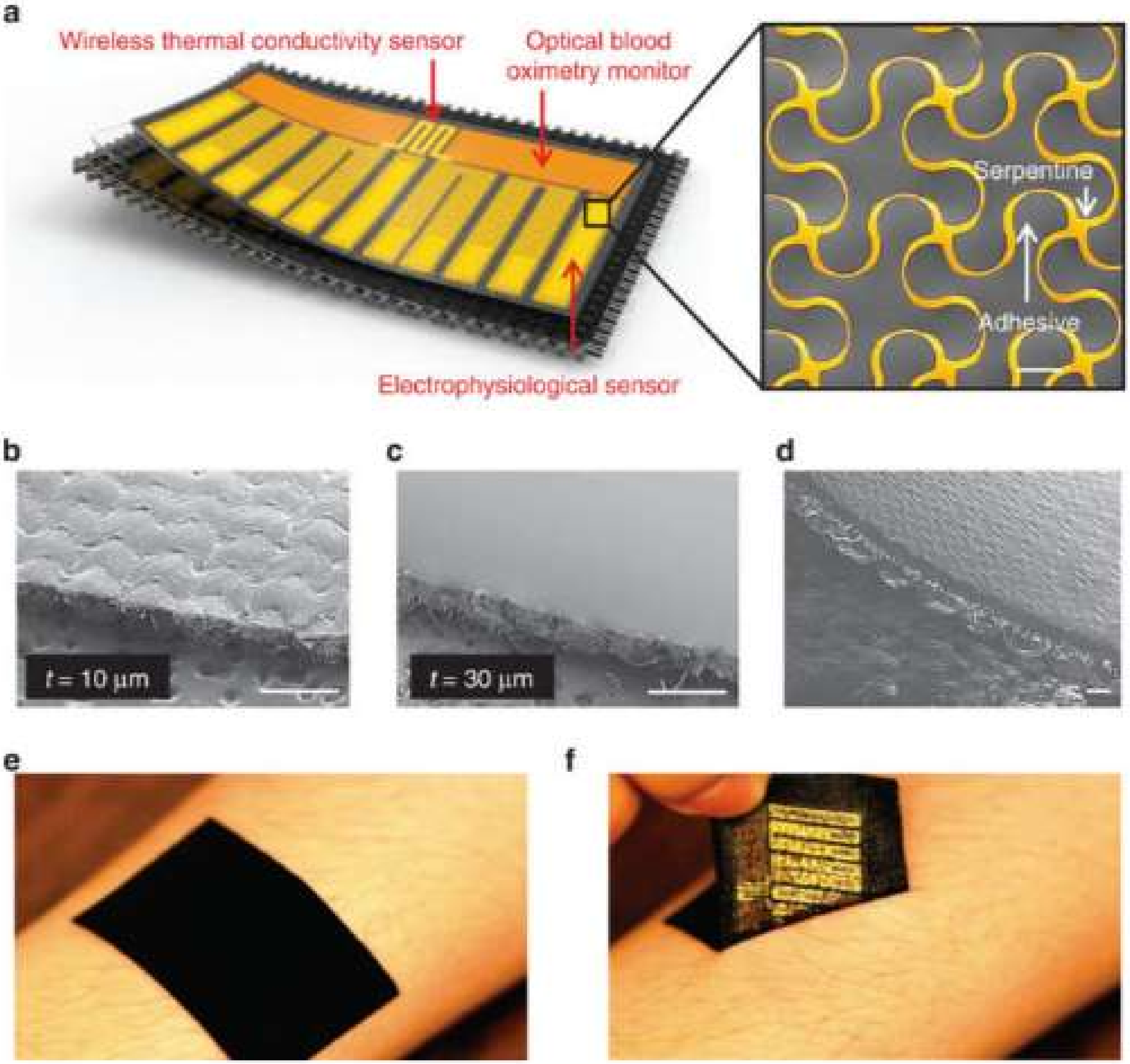
Figure 5



Demonstration of RF wireless power transfer. Epidermal RF system operating while (**a**) twisted and (**b**) repeatedly stretched. (**c**) Demonstration of the use of an epidermal RF system to capture RF output from a cell phone to supply power to an LED. (**d**) Epidermal RF system powering a red LED while on the skin using RF transmitted by a remote source (15 W, 1.5 m, 700 MHz–1.5 GHz). Open-circuit voltage output (**e**) in air and (**f**) on skin when implemented with different matching components.

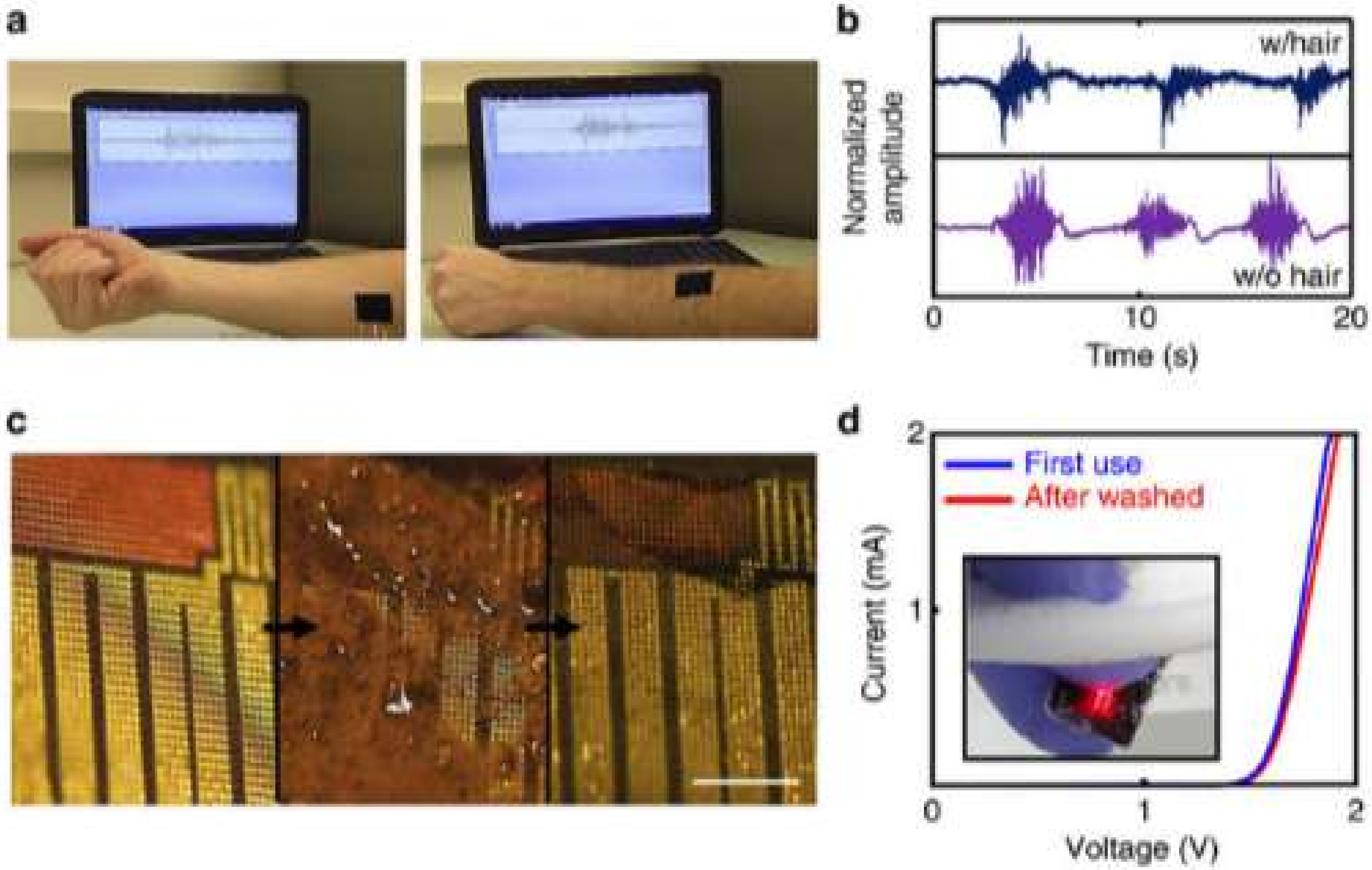
Full size image »

stretchable electronic systems.

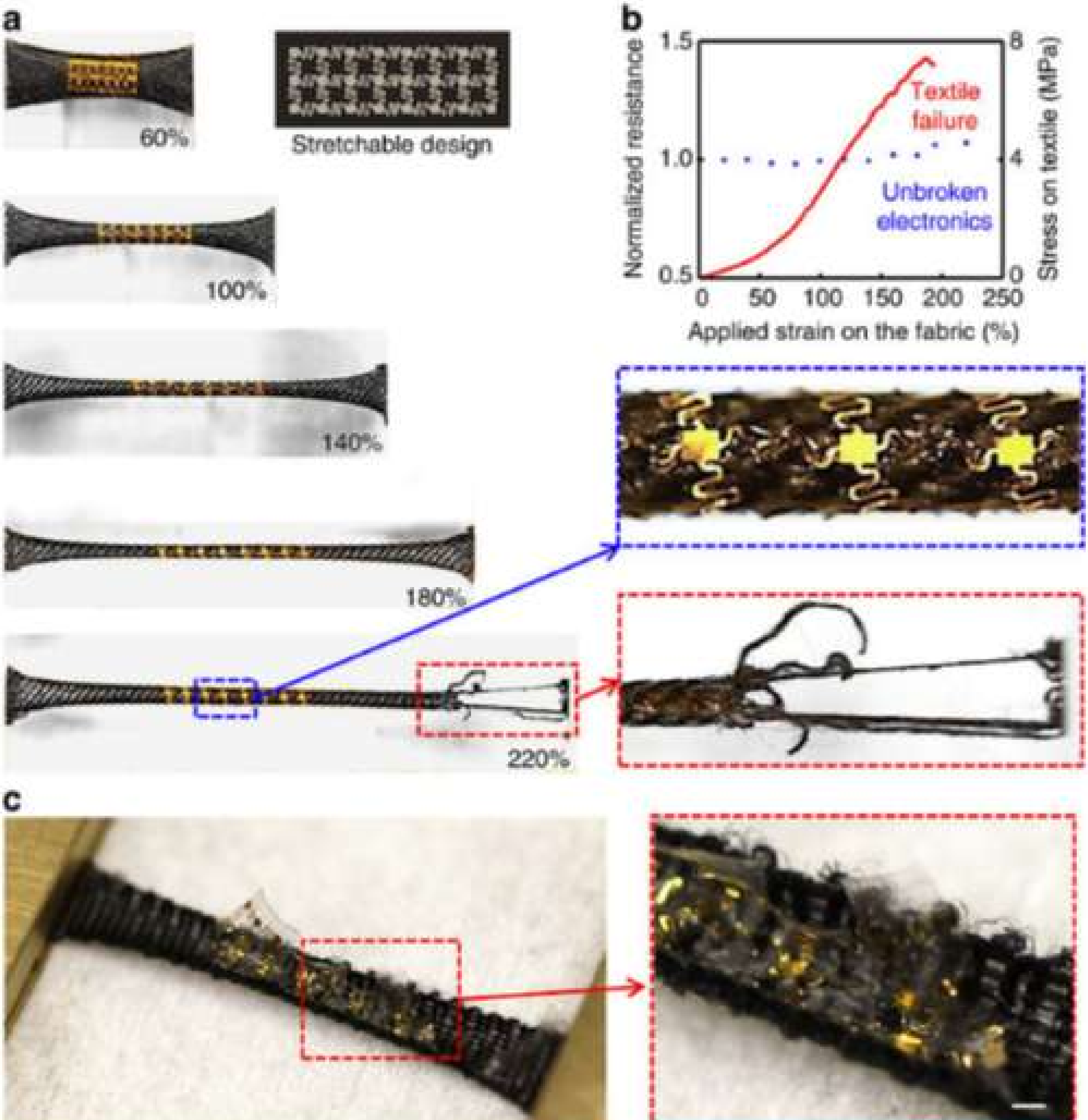


(**a**) Illustrations of the various layers in a representative system, including the active electronics (~5 μm thick), an ultralow modulus elastomer coating (~100 μm thick) and a stretchable fabric (~1 mm thick; 90% nylon, 10% spandex). The active electronics layer includes a wireless thermal conductivity sensor, a blood flow monitor and an EP sensor. The magnified view shows the FS structure of part of an EP sensor, as a coloured scanning electron micrograph (SEM; gold corresponds to the conducting traces, scale bar, 100 μm).

Figure 2: Capabilities for applying device to the skin with hairs and washing.

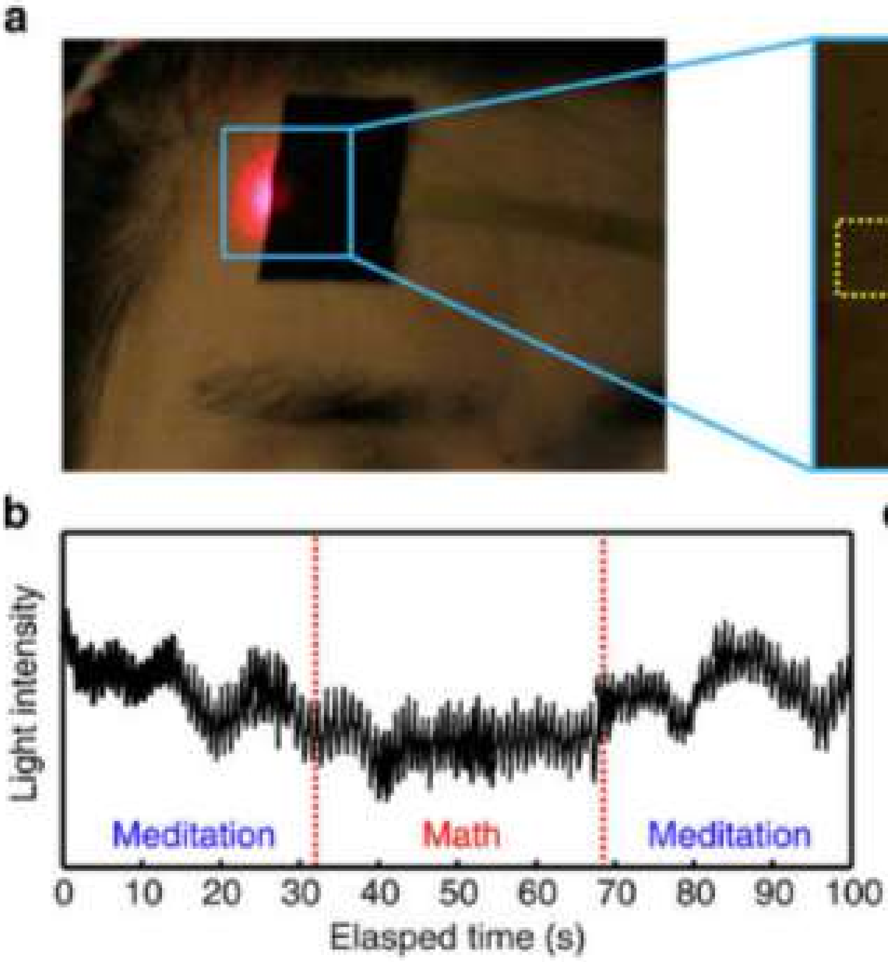


EMG measurement setup (**a**) and data (**b**) from inside (w/o hair) and outside of the forearm (w/hair). (**c**) Optical images (scale bar, 1 mm) of cleaning with soap and water: as-fabricated device (left), after contamination with dirt (center) and after washing with soap and water (right). (**d**) Current–voltage characteristics of an AlInGaP microscale inorganic LED module associated with the blood flow monitoring after first use and after washing. The image in the inset shows the device immersed in soapy water.



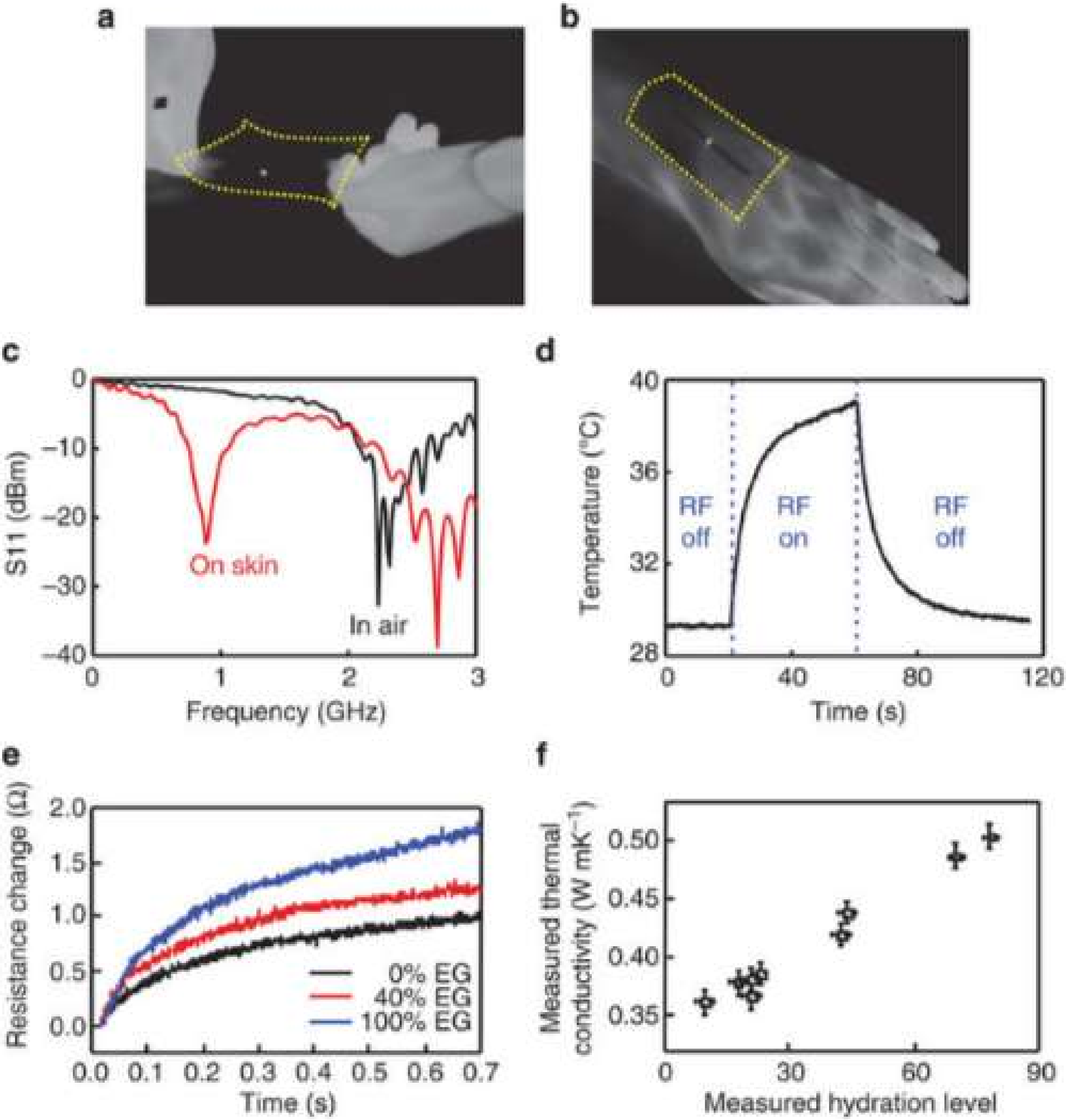
(**a**) Device integration with UL-Sil coating (E=3 kPa), Optical images of a stretchable electronic test structure (thickness ~2 μm) at increasing levels of uniaxial stretching. Magnified views of unbroken electronics (blue dotted box) and torn fabric (red dotted box) observed at an applied strain of 220%. (**b**) Normalized electrical resistance (left y axis) and

Figure 6: Functional demonstration of cerebral oximetry.



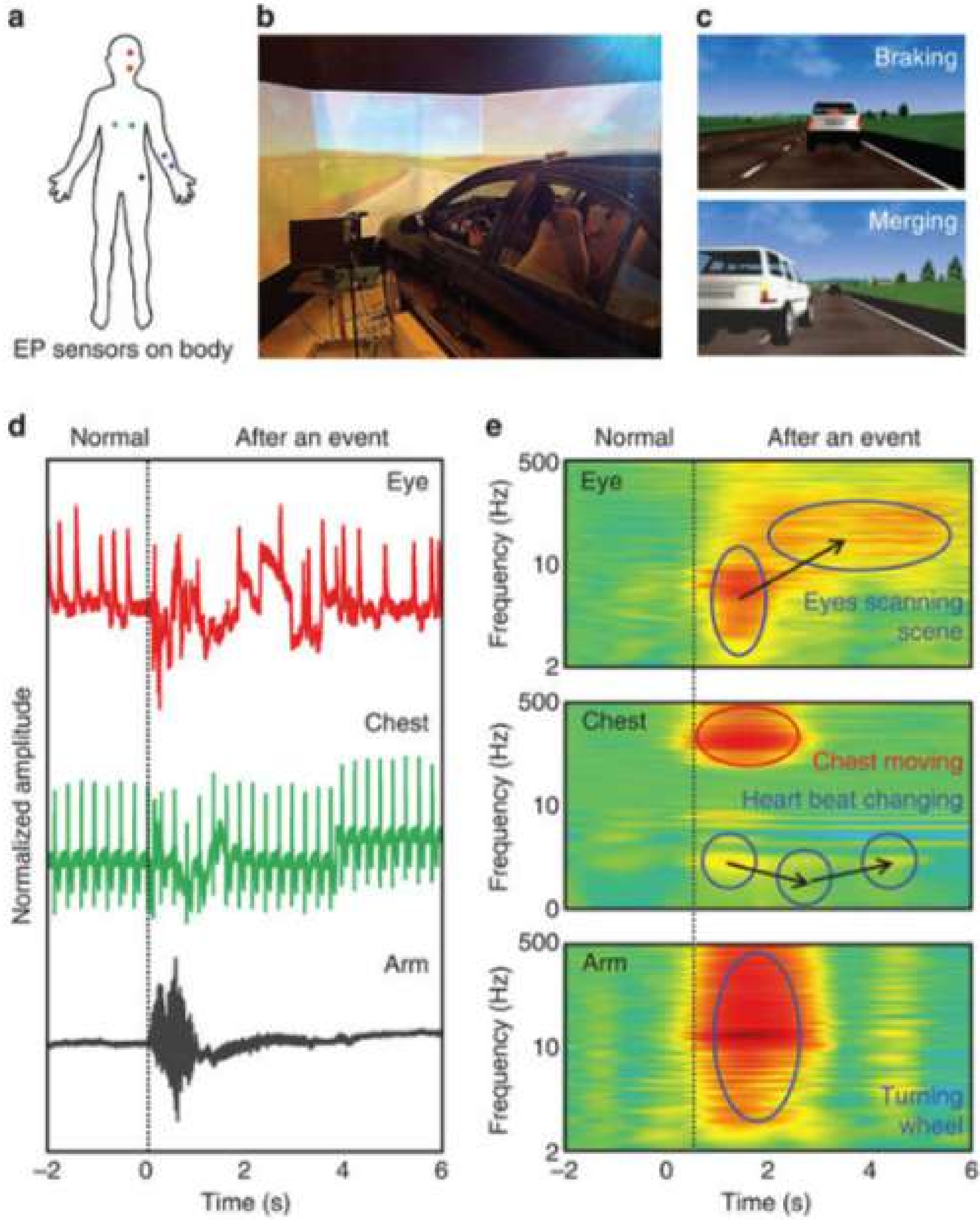
(**a**) Image of a device laminated on the skin of the forehead, with an operating μ-ILED (wavelength 650 nm) under room light illumination and in the dark. Scale bar, 1 cm. Light intensity integrated over the region indicated by the yellow dotted box of the right frame of (**a**), plotted as a function of time (**b**). (**c**) Scattered light intensity during mental math and rest, mean centred, smoothed with a moving window and averaged over time for each condition. Error bars denote +/−1 s.d. of the signal over time in each condition. Reduced intensity during mental activity is consistent with increased light absorption induced by additional blood flow in the cerebral cortex.

Figure 7: Wireless evaluation of skin thermal properties.



IR images of a wireless heating device, collected during exposure to RF energy, in a free-standing state (**a**) and mounted on the wrist area (**b**). (**c**) S_{11} coefficient measured from the wireless heating element, evaluated in air and on human skin. (**d**) Transient control of temperature on the skin using the wireless heating element, and measured using an IR

Figure 8: EP monitoring of a human subject in a driving simulator.



Share

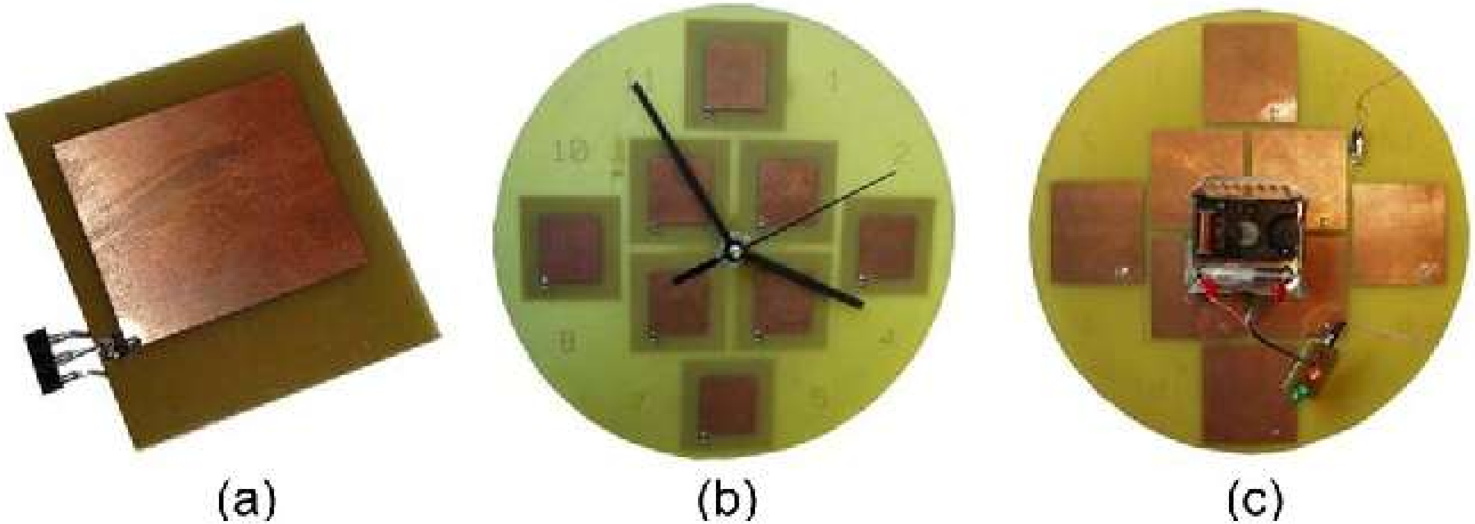


Fig. 16. Wirelessly RF powered wall clock. (a) Rectenna element. (b) Front view of the clock with eight rectenna elements. (c) Back view of the clock showing the separate rectenna element's ground planes.

Share

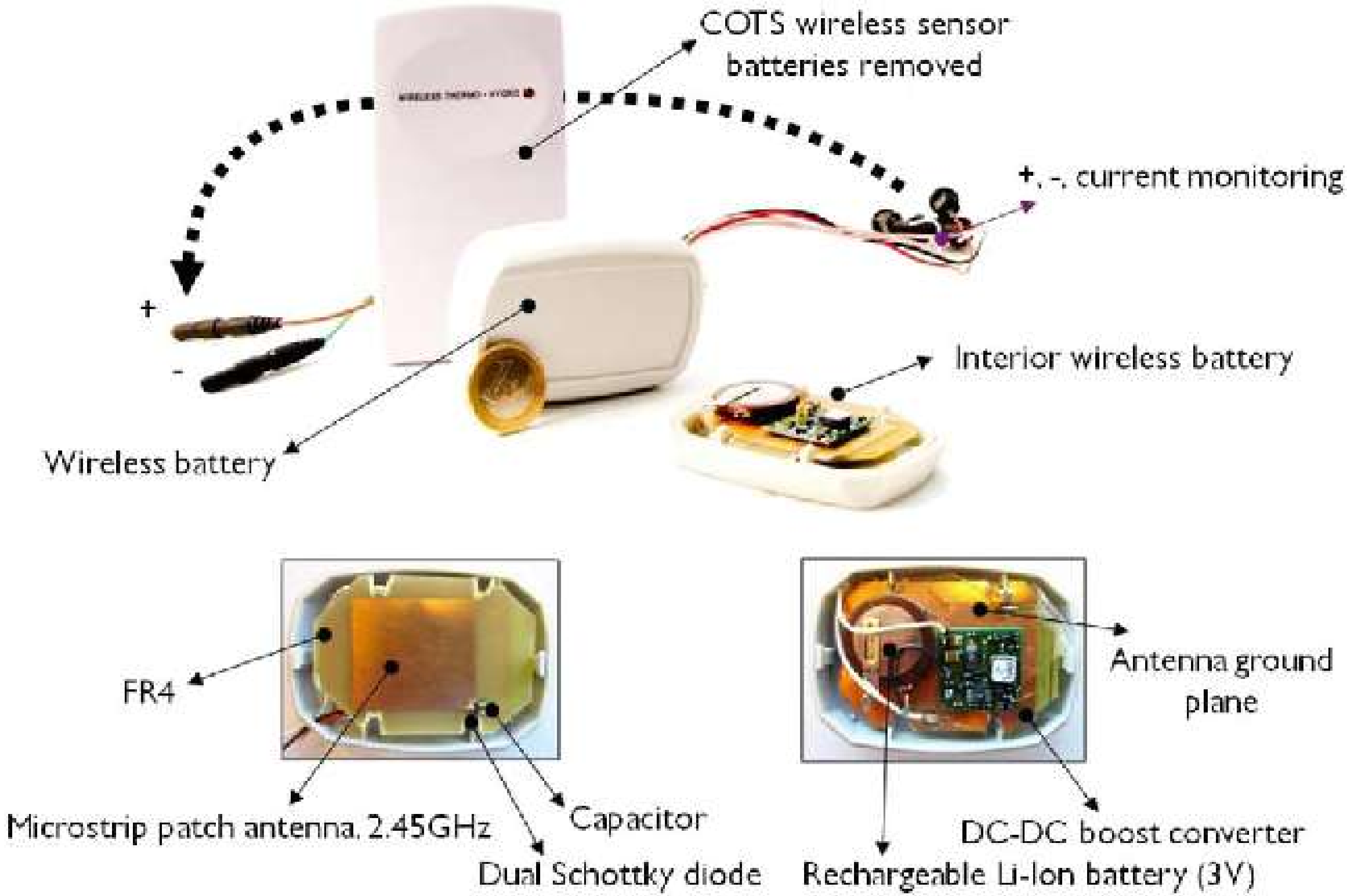
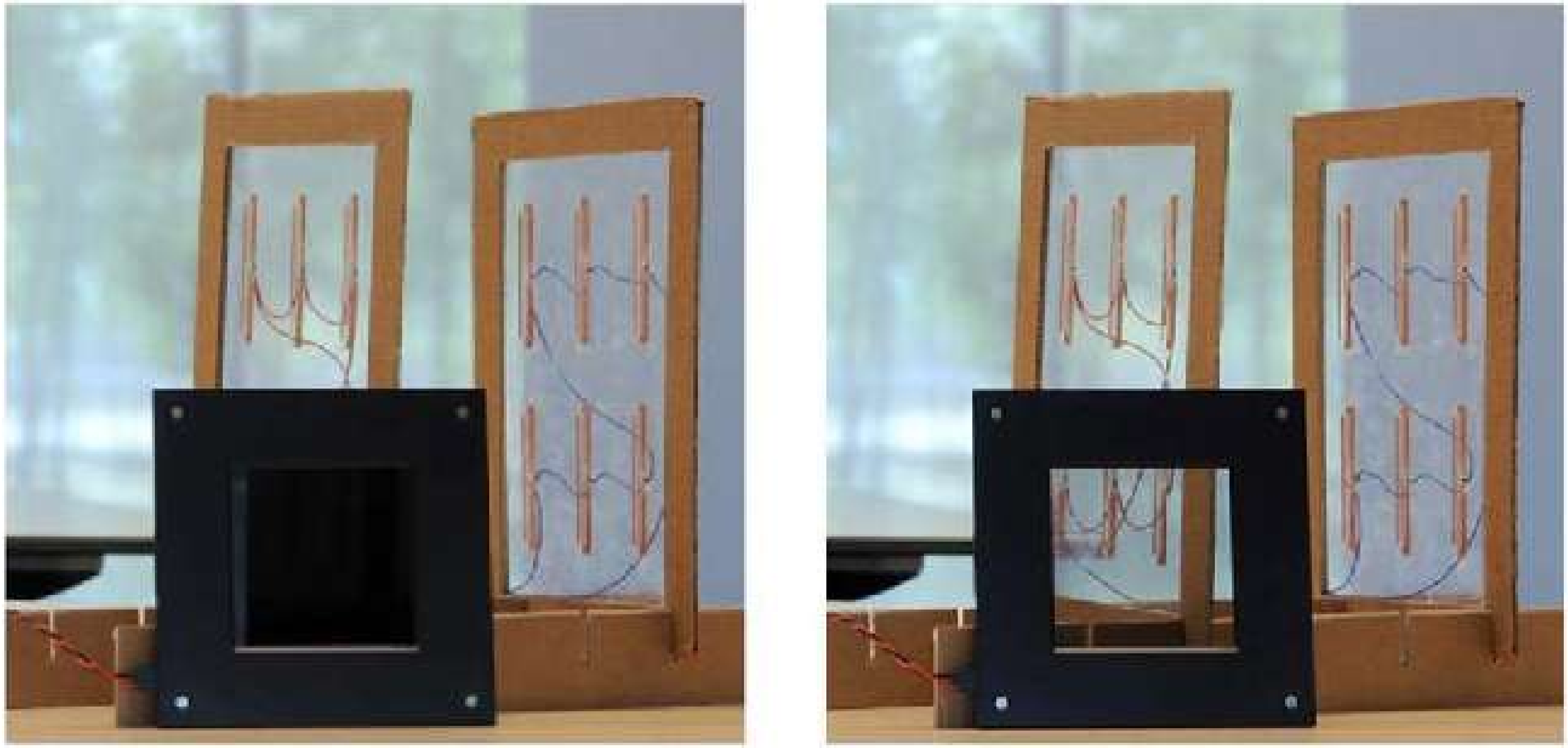


Fig. 20. Packaged 2.45-GHz remote RF battery charger and COTS 433-MHz temperature and humidity sensor. 433-MHz base station not shown.



(a) (b)

Fig. 17. E-skin. (a) No voltage supplied: E-skin panel is opaque. (b) Voltage supplied: E-skin panel is optically transparent.

Share

Fig. 21. Wireless energy transport measurement setup. By optimizing the receiver location, a battery may be charged up to 18 m from the source.

Share

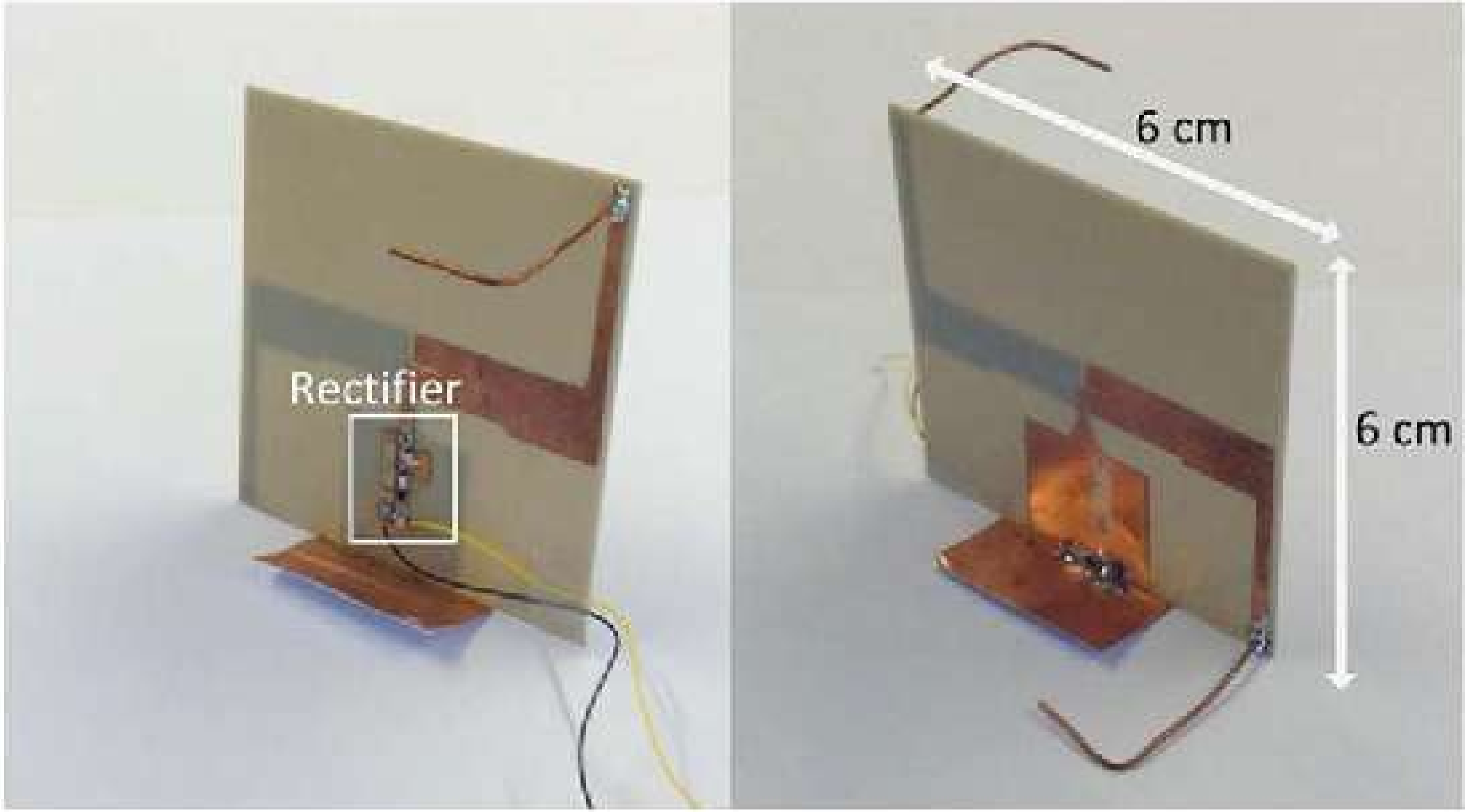
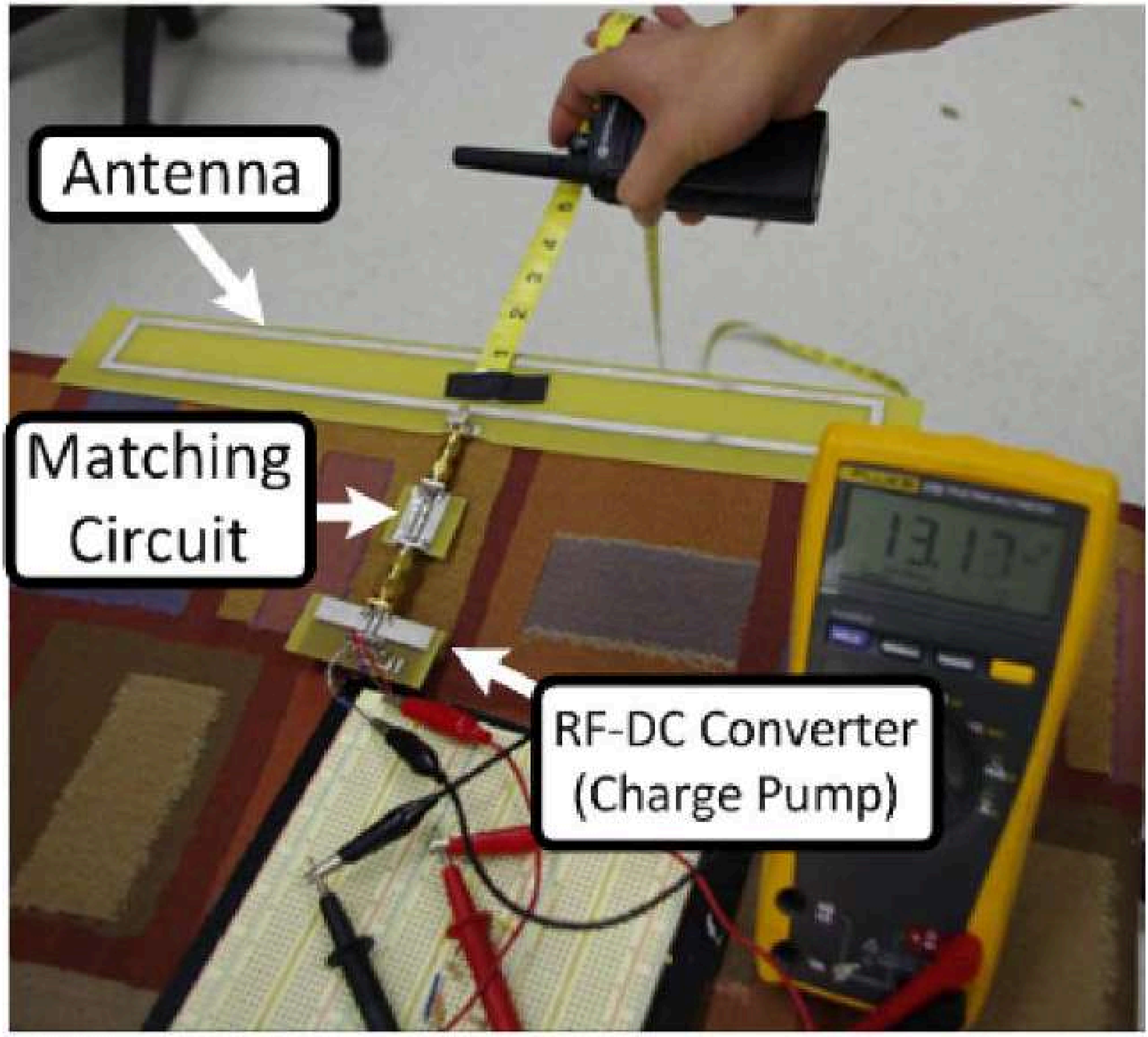
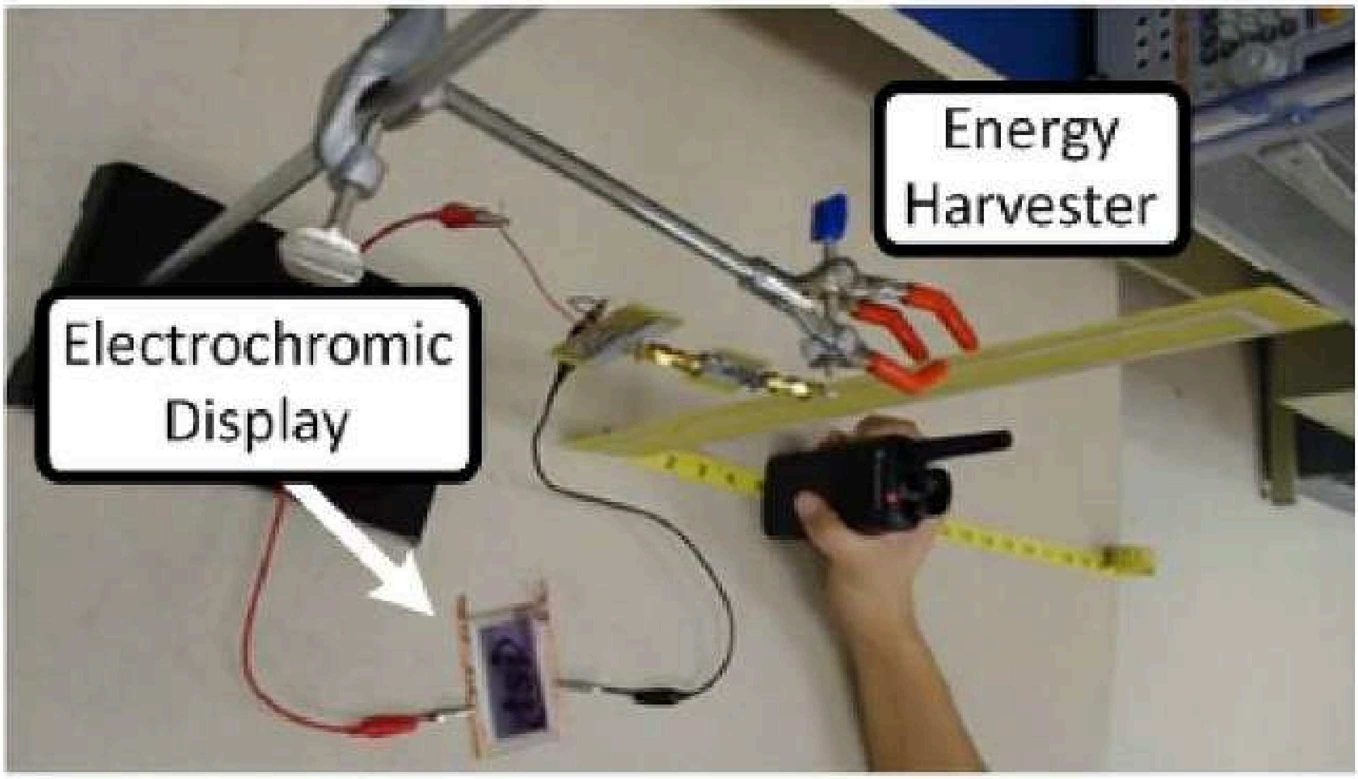


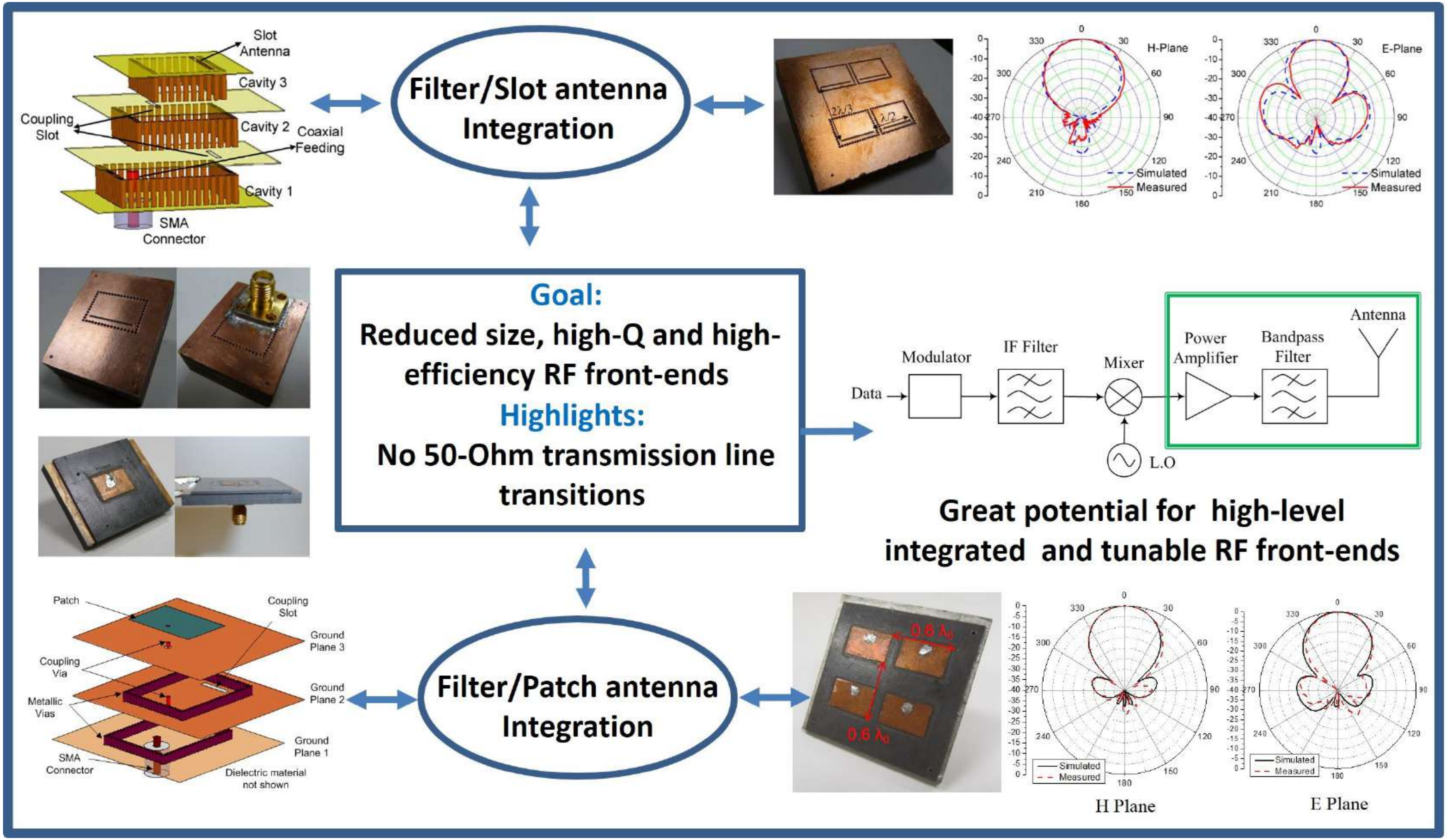
Fig. 16. Fabricated dual-band rectenna prototype [17].


Antenna
Matching Circuit
RF-DC Converter (Charge Pump)

(a)


Energy Harvester
Electrochromic Display

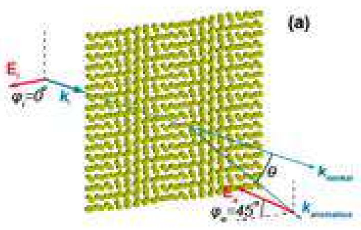
(b)



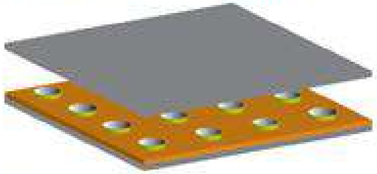
Slot Antenna
Cavity 3
Coupling Slot
Cavity 2
Coaxial Feeding
Cavity 1
SMA Connector
Filter/Slot antenna Integration
H-Plane
E-Plane
Simulated
Measured
Goal:
Reduced size, high-Q and high-efficiency RF front-ends
Highlights:
No 50-Ohm transmission line transitions
Data
Modulator
IF Filter
Mixer
Power Amplifier
Bandpass Filter
Antenna
L.O
Great potential for high-level integrated and tunable RF front-ends
Patch
Coupling Slot
Ground Plane 3
Coupling Via
Ground Plane 2
Metallic Vias
Ground Plane 1
SMA Connector
Dielectric material not shown
Filter/Patch antenna Integration
$0.8\ \lambda_0$
$0.6\ \lambda_0$
Simulated
Measured
H Plane
E Plane

Recent Collaboration In Computational Nanophotonics at Purdue and Beyond

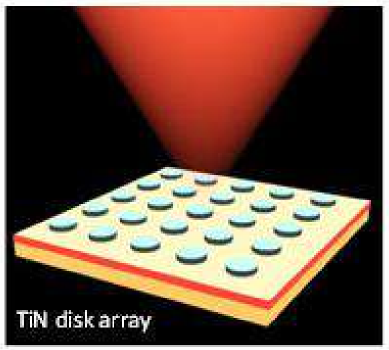
Chiral Metasurfaces
for Optical Activity
(the Shalaev group)



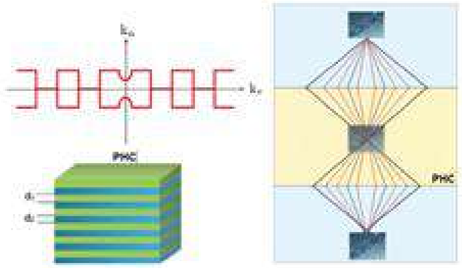
Compact Cavities and
Waveguides using
Reflecting Metasurfaces
(the Shalaev group)



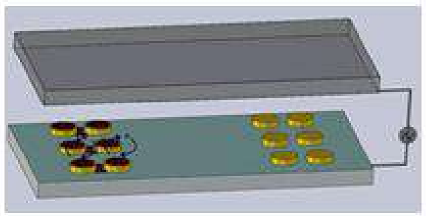
High temperature
thermal emitter for
thermo-photovoltaics
(the Shalaev, Shakouri,
Sands, and Bermel
groups)



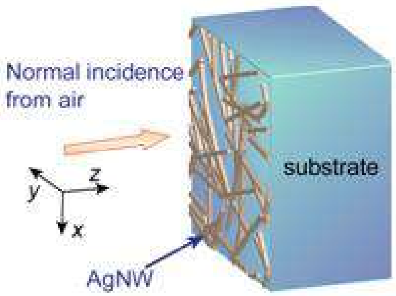
Nano-imaging and Nanoscope
Narimanov (Purdue)
Pendry (Imperial College)
Zhang (UC Berkeley)
Liu, UCSD



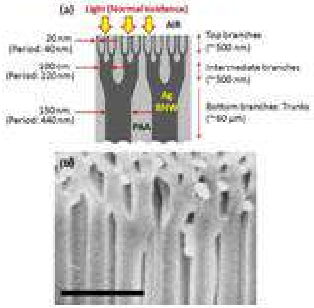
Hybrid Electro-Plasmonic
Tweezers
(the Wereley and Boltasseva
groups)



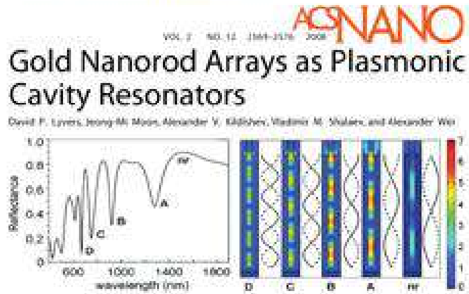
Ag nanowires-graphene
transparent conducting
electrodes (the Janes group)



Optics of Branched Silver
Nanowires
(the Janes group)

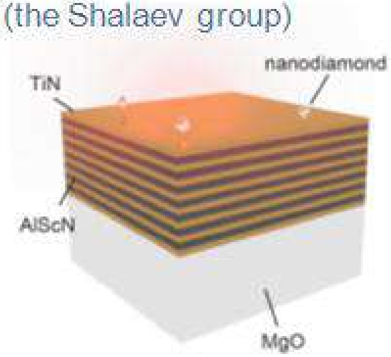


Au Nanorod Plasmonics
(the Wei group)

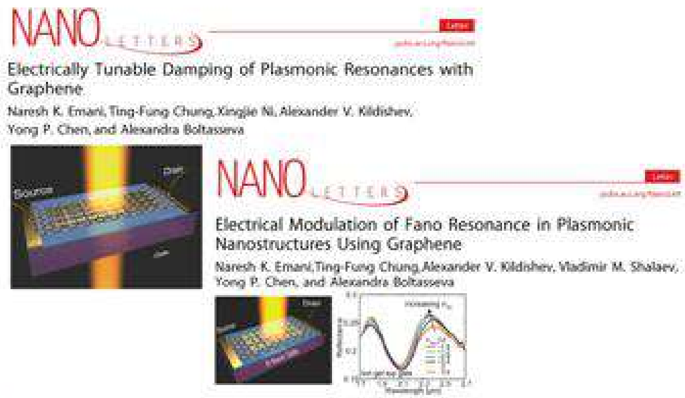

ACS NANO

Gold Nanorod Arrays as Plasmonic Cavity Resonators

Enhanced single-photon
sources based on NV centers
and metamaterials
(the Shalaev group)



Dynamic Plasmonics with Graphene
(the Yong Chen group, the Boltasseva group)


NANO LETTERS

Electrically Tunable Damping of Plasmonic Resonances with Graphene

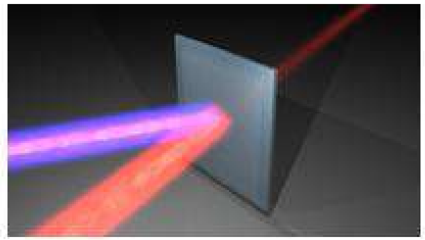
Naresh K. Emani, Ting-Fung Chung, Xingjie Ni, Alexander V. Kildishev, Yong P. Chen, and Alexandra Boltasseva

NANO LETTERS

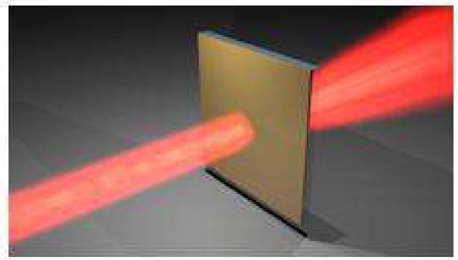
Electrical Modulation of Fano Resonance in Plasmonic Nanostructures Using Graphene

Naresh K. Emani, Ting-Fung Chung, Alexander V. Kildishev, Vladimir M. Shalaev, Yong P. Chen, and Alexandra Boltasseva

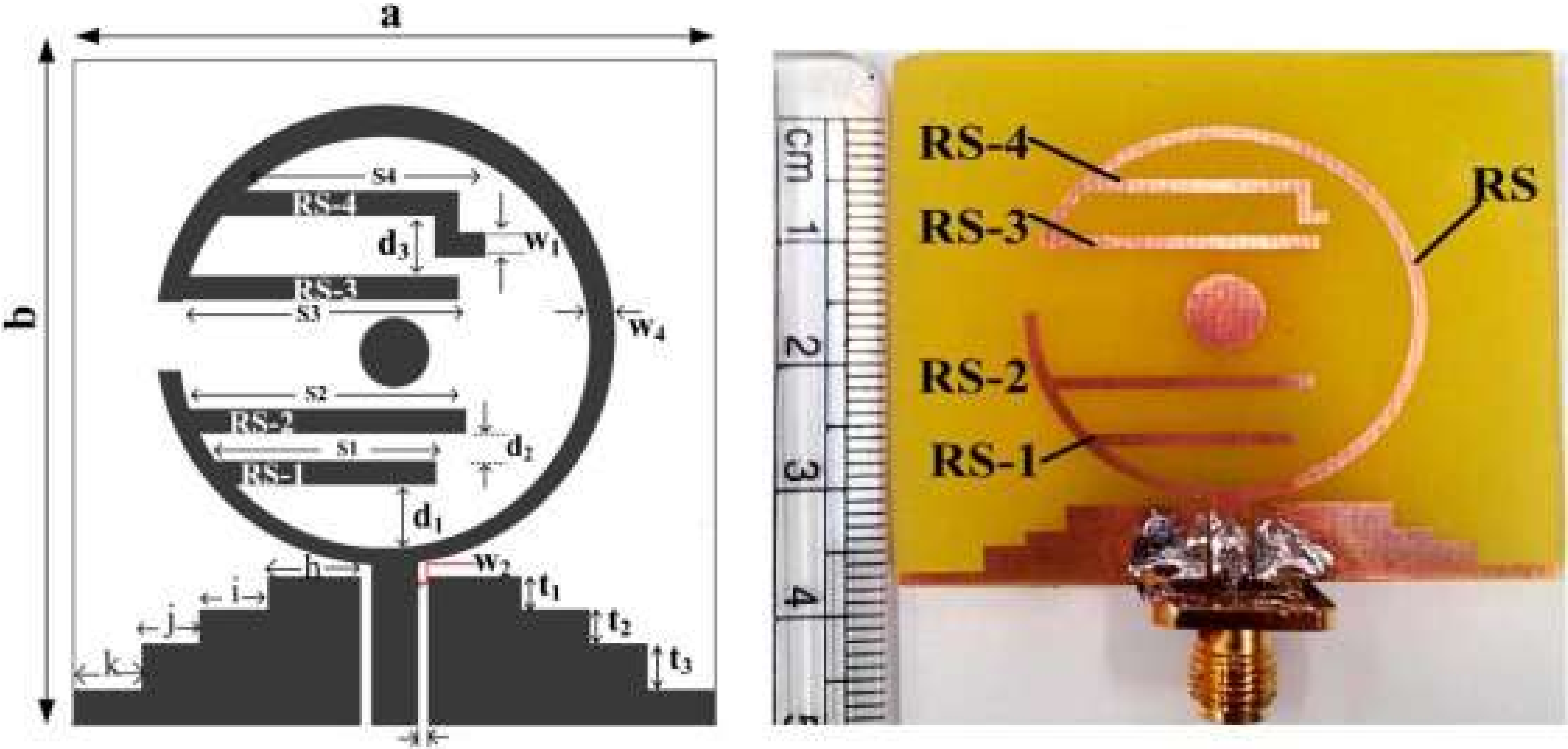
Dynamic Metamaterials and Devices
(the Boltasseva group)



Nonlinear Optical Properties of
Alternative Plasmonic Materials
Bonner, Gavrilenko (NSU) with
the Boltasseva and Shalaev groups

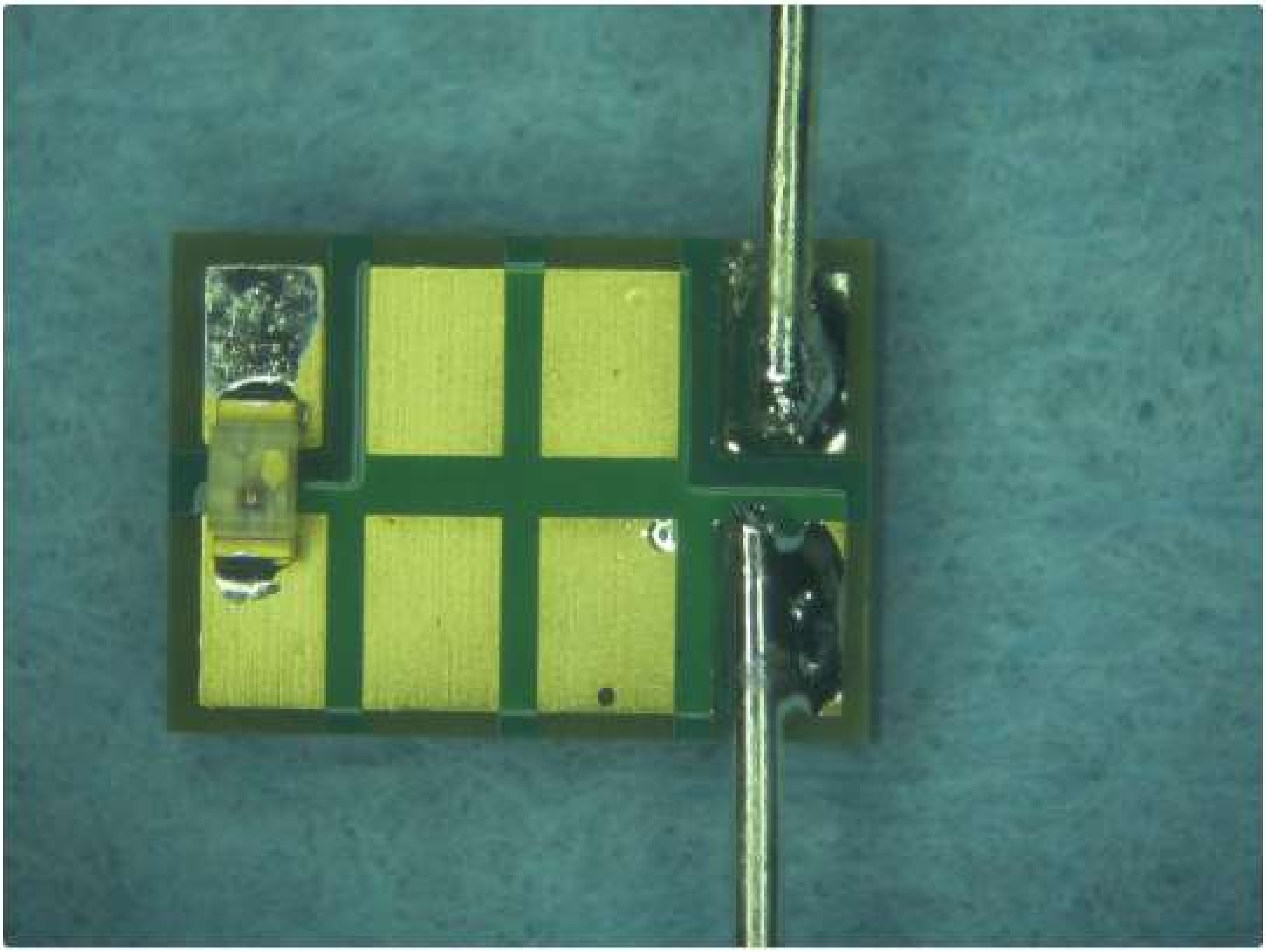



Tego Power Harvest Technology
Passive LED
127.0.0.1
6:02
Stop Reading
Tag Events
EPC ID
Ant
Ct


a
b
S4
RS-4
d3
w1
RS-3
S3
w4
S2
RS-2
d2
S1
RS-1
d1
h
w2
i
t1
j
t2
k
t3
w3
cm
RS-4
RS-3
RS
RS-2
RS-1

(a) (b)

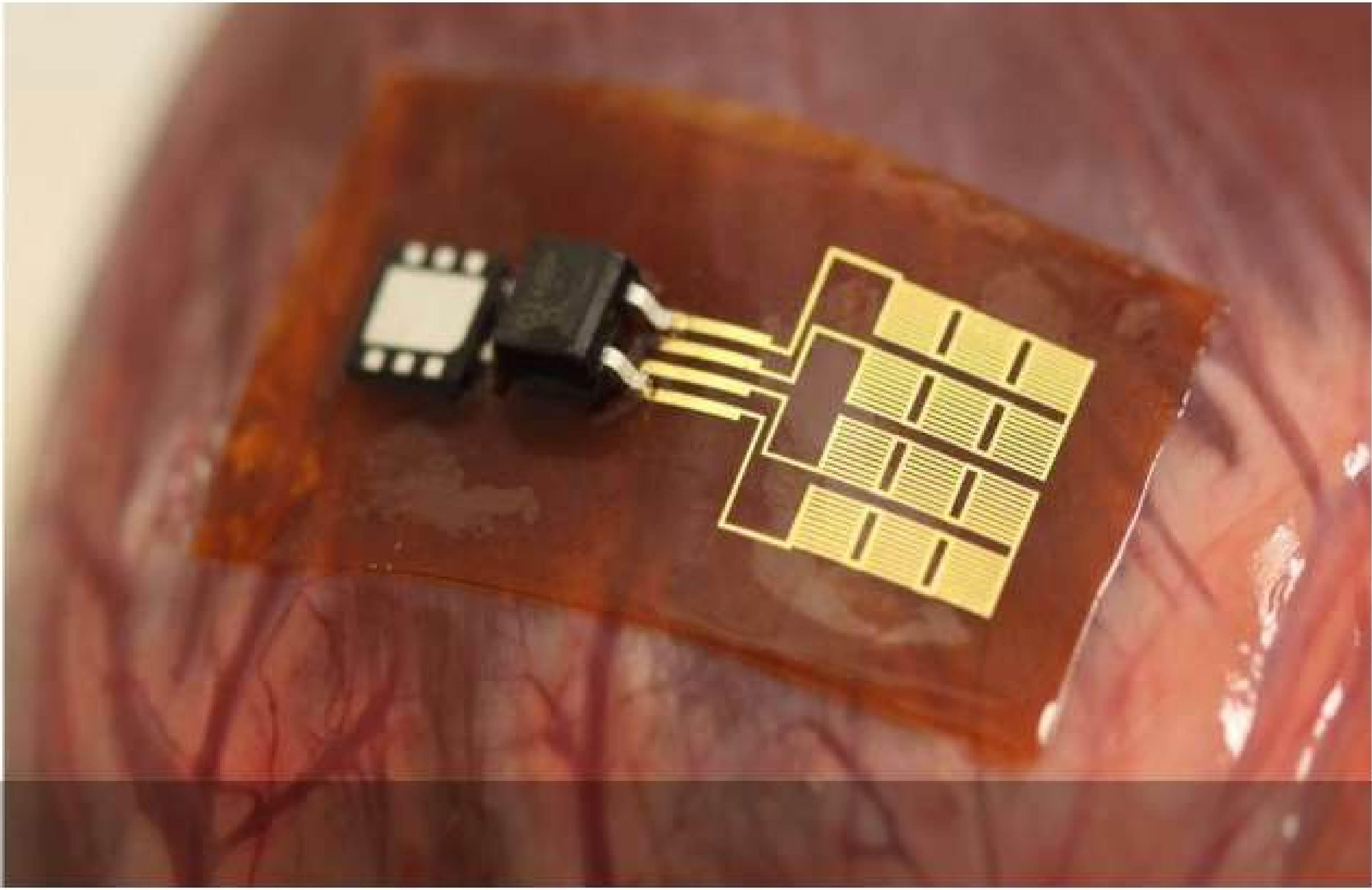
Step 1: Assembly Instructions



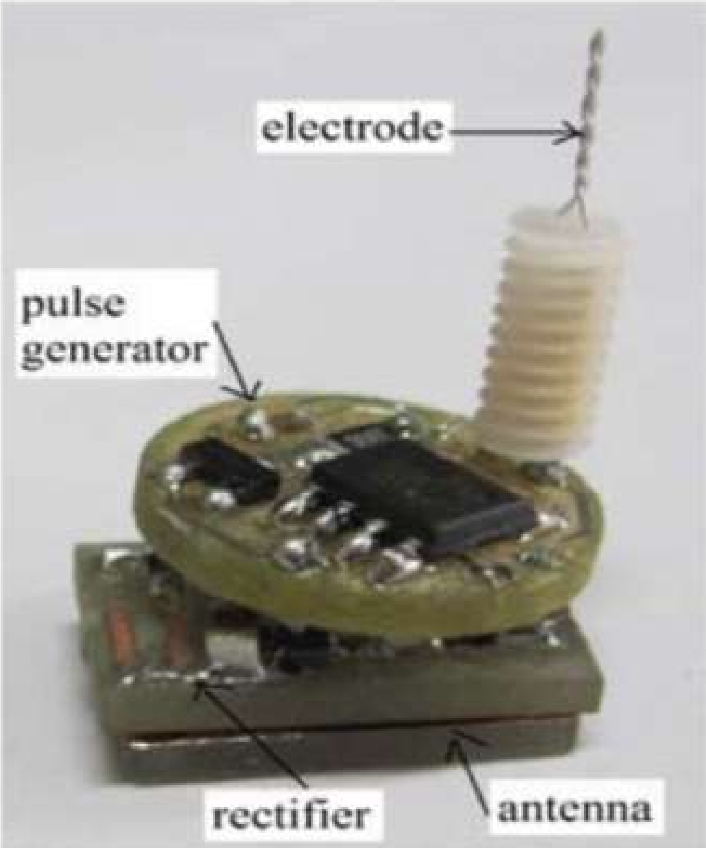
Cut the resistor wires off next to the resistor. These are just the right size at 1 1/8" long for a 2.5GHz dipole. Throw away the resistor and keep the wires.

Put solder paste on the module at pins 1 & 8 and at pins 4 and 5.Place the wires on pins 4 and 5 and solder carefully using tweezers to hold the wires (it will burn you otherwise). Solder at the lowest soldering temperature possible to avoid damaging the module. If the iron is too hot then you may damage the internal connections inside the module. Use a minimum of time for soldering (<10secs). The wires work as a dipole antenna to collect the 2.5GHz energy into the RF (Radio Frequency) Input of the module.

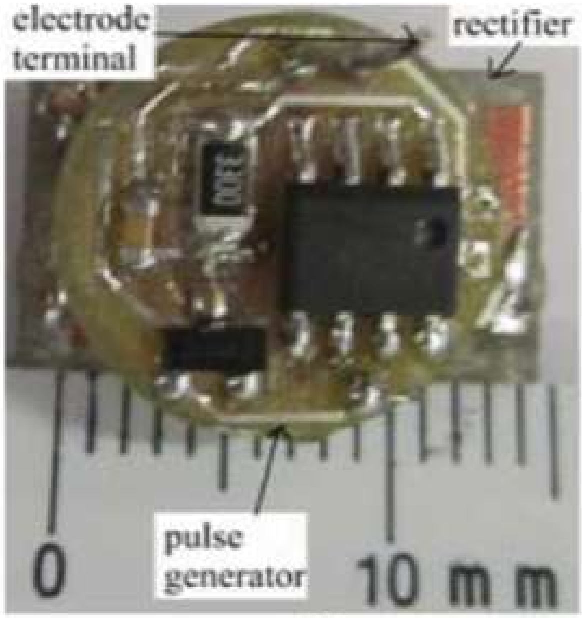
Place the LED with the anode (positive side) onto pin 1 and the cathode (negative side) on pin 8 and solder carefully. For those not familiar with LEDs, the triangle symbol of the diode should point to the ground pin of the module (pin 8). Your final microwave harvester should look like figure 2



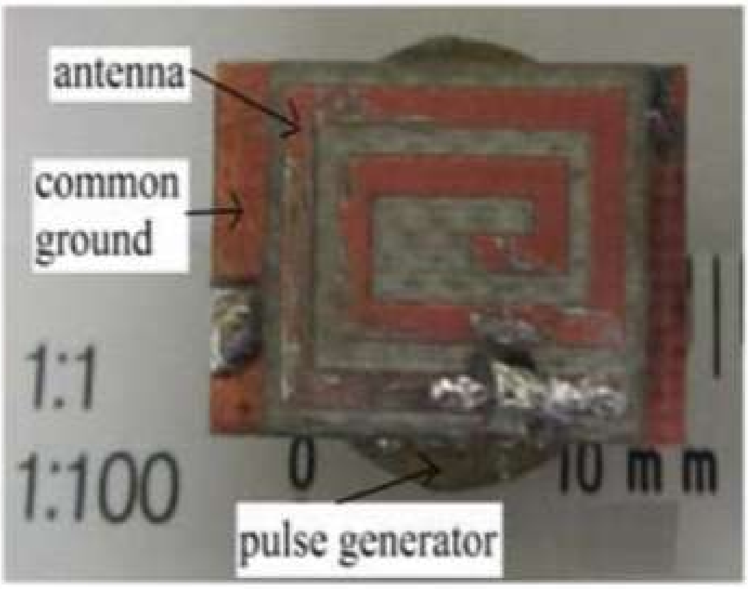
The implant mounted on the heart of a cow


electrode
pulse
generator
rectifier
antenna

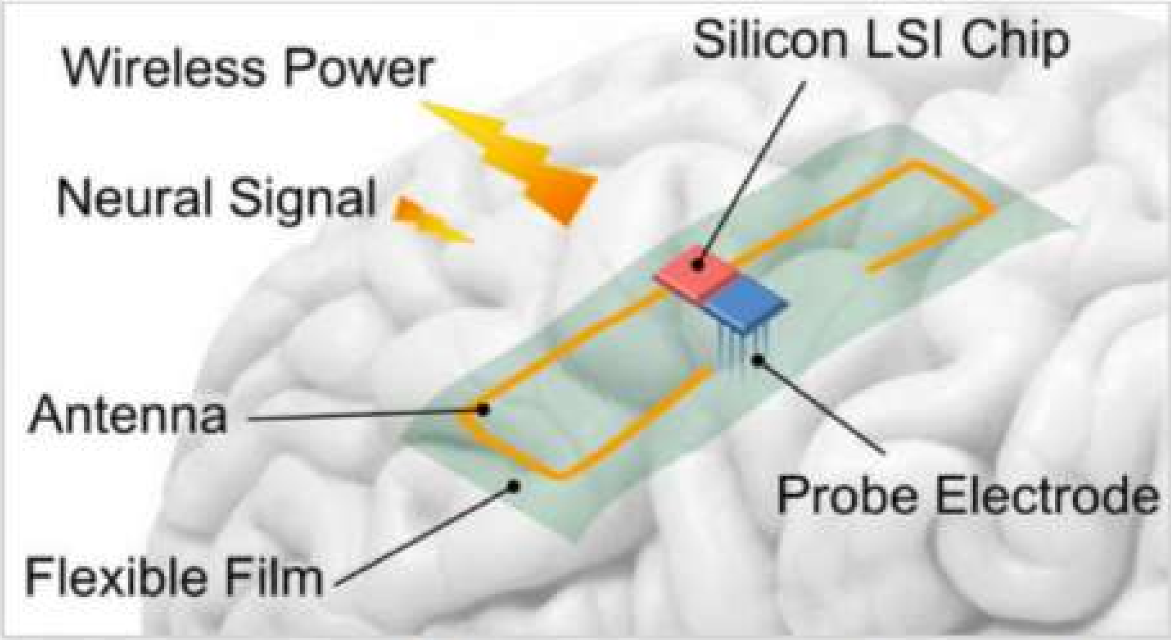
(a)


electrode
terminal
rectifier
pulse
generator
0
10 m m

(b)


antenna
common
ground
1:1
1:100
0
10 m m
pulse generator

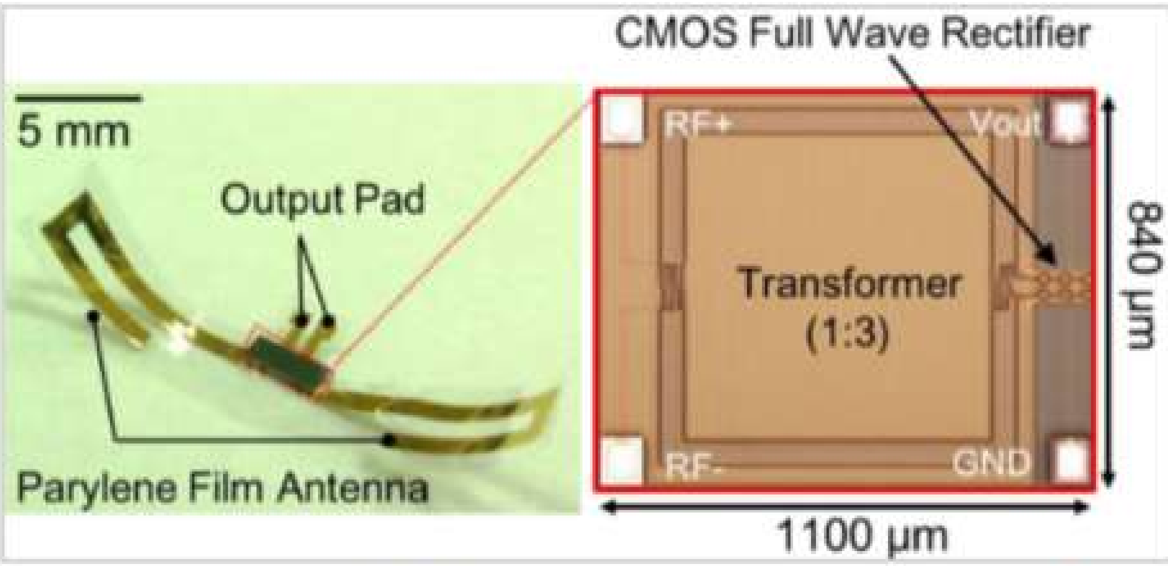
(c)



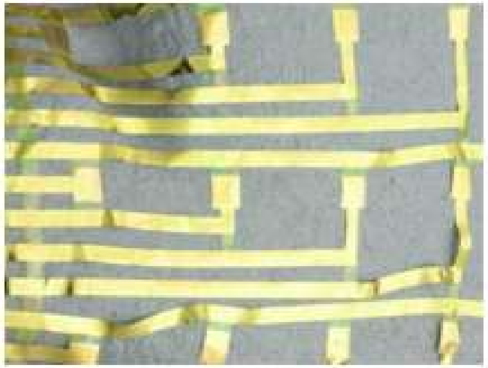
Schematic of proposed architecture of an implantable wireless-powered neural interface system that can provide power to implanted devices. Adding a transmitter chip could allow for neural signals to be transmitted via the antenna for external processing. (credit: Toyohashi University Of Technology)

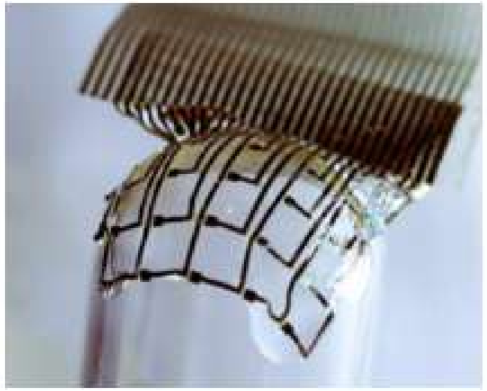
A research team at Toyohashi University of Technology in Japan has fabricated an implanted wireless power transmission (WPT) device to deliver power to an implanted neural interface system, such as a brain-computer interfa (BCI) device.

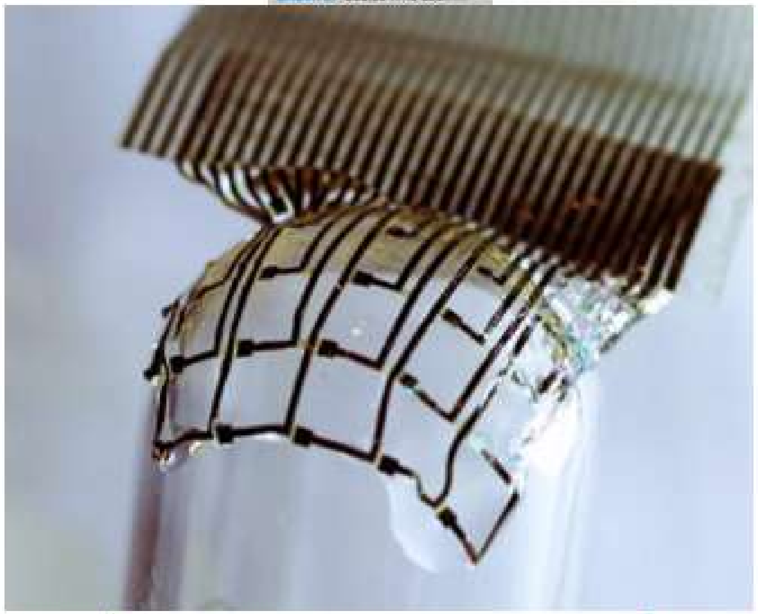
Described in an open-access paper in *Sensors* journal, the system avoids having to connect an implanted device to a external power source via wires through a hole in the skull, which can cause infections through the opening and risk o infection and leakage of the cerebrospinal fluid during long-term measurement. The system also allows for free-movir subjects, allowing for more natural behavior in experiments.

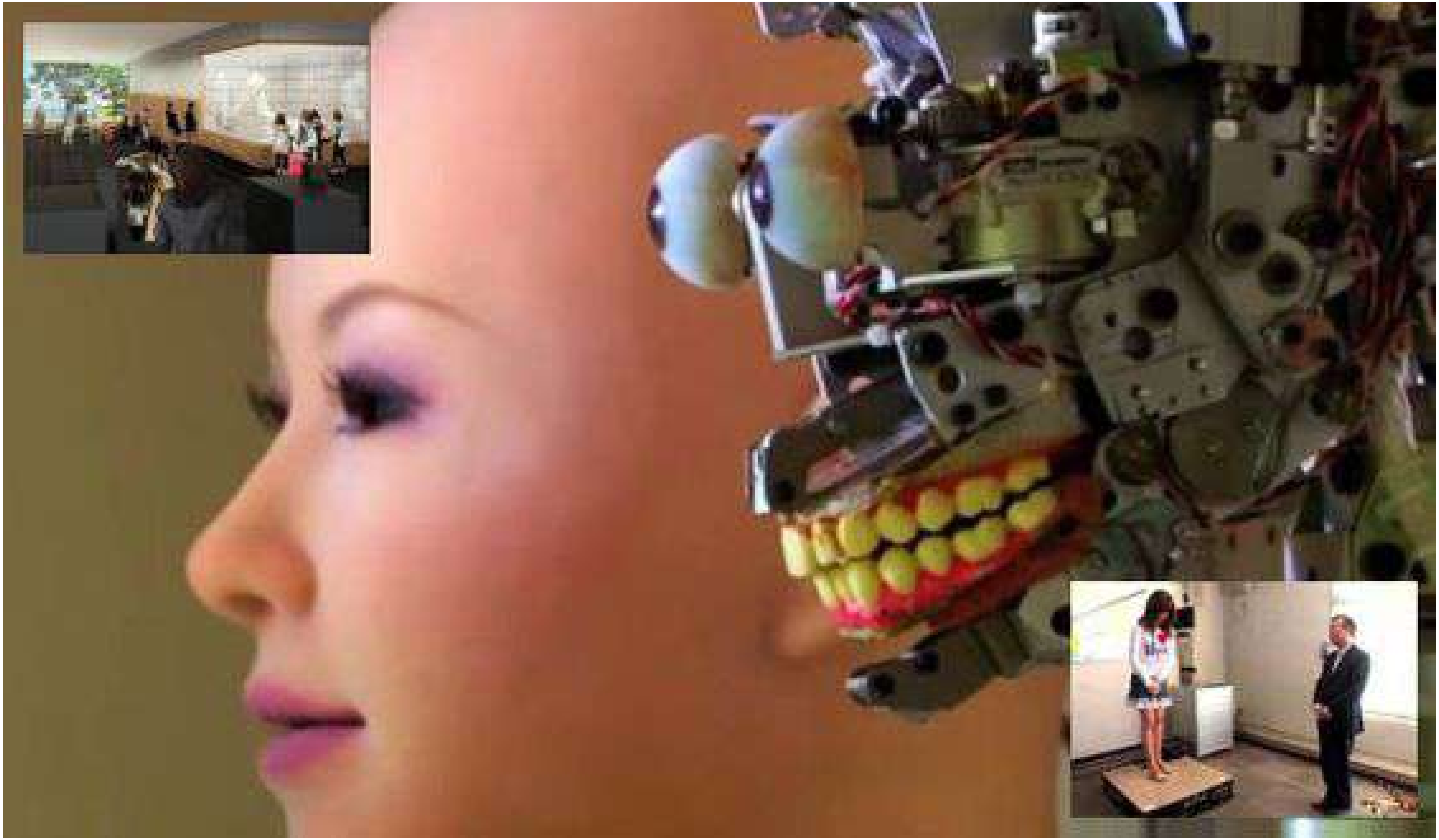


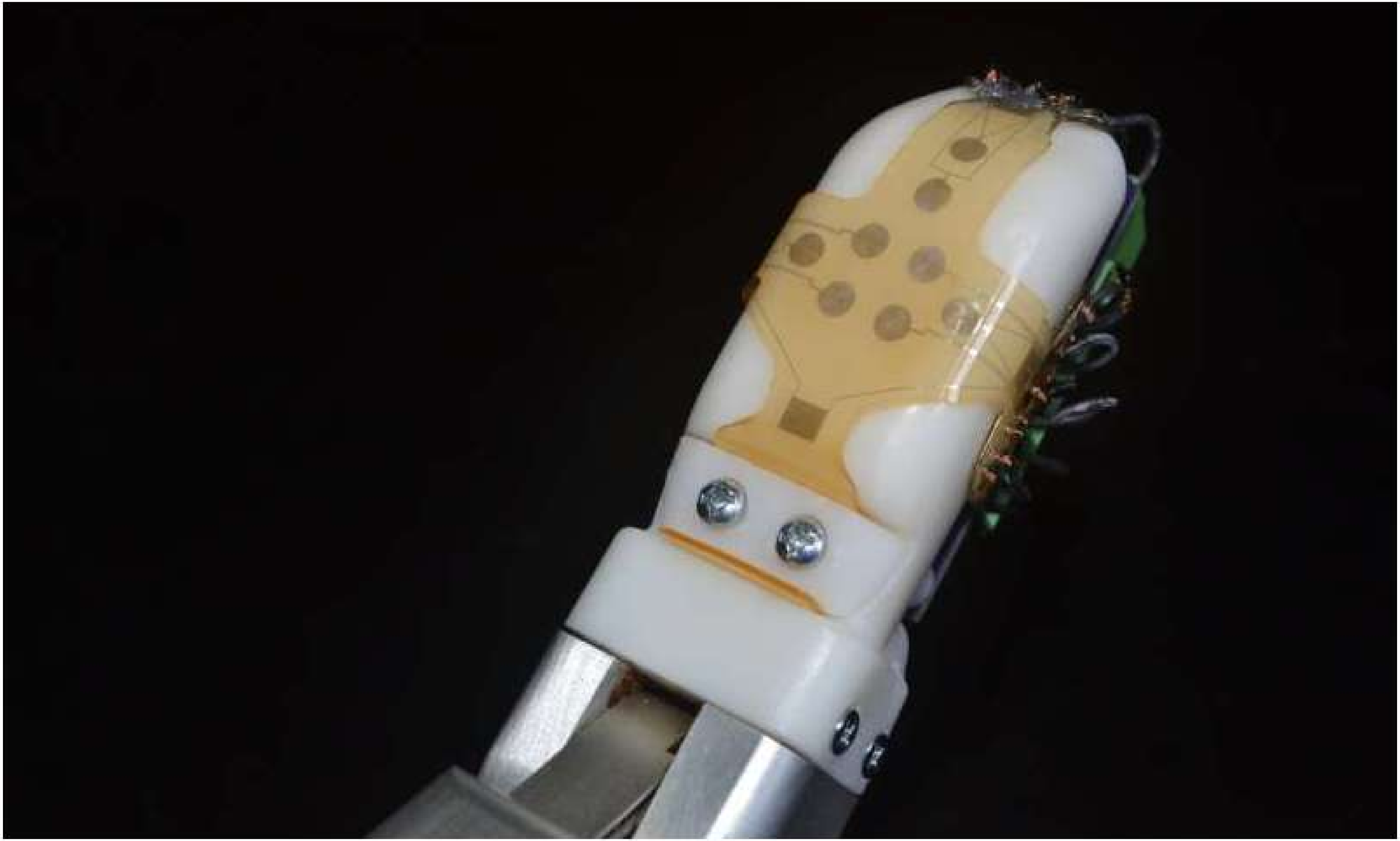
Photographs of fabricated flexible antenna and bonded CMOS rectifier chip with RF transformer (credit: Kenji Okabe et al./Sensors)



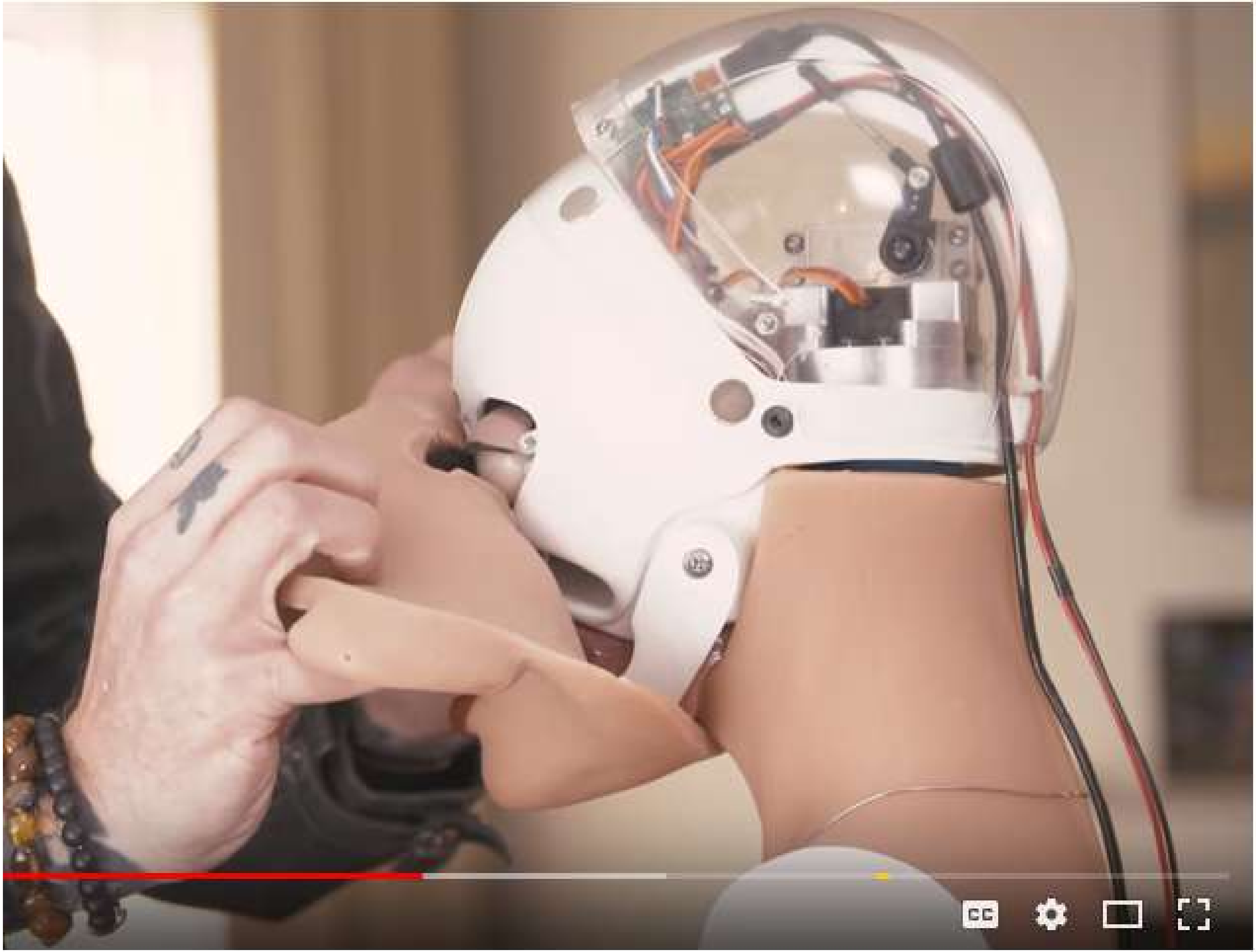




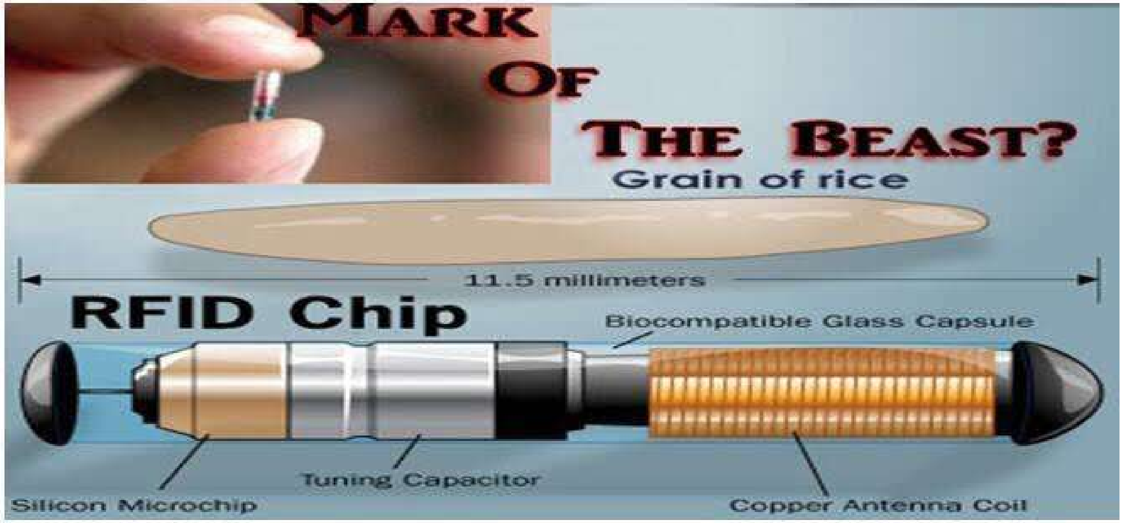


The bio-inspired sensor skin developed by University of Washington and UCLA engineers can be wrapped around a finger or any other part of a robot or prosthetic device to help convey a sense of touch. Credit: UCLA

Fully functioning sex robots are coming to the UK and their creator is promising "an experience like no other."

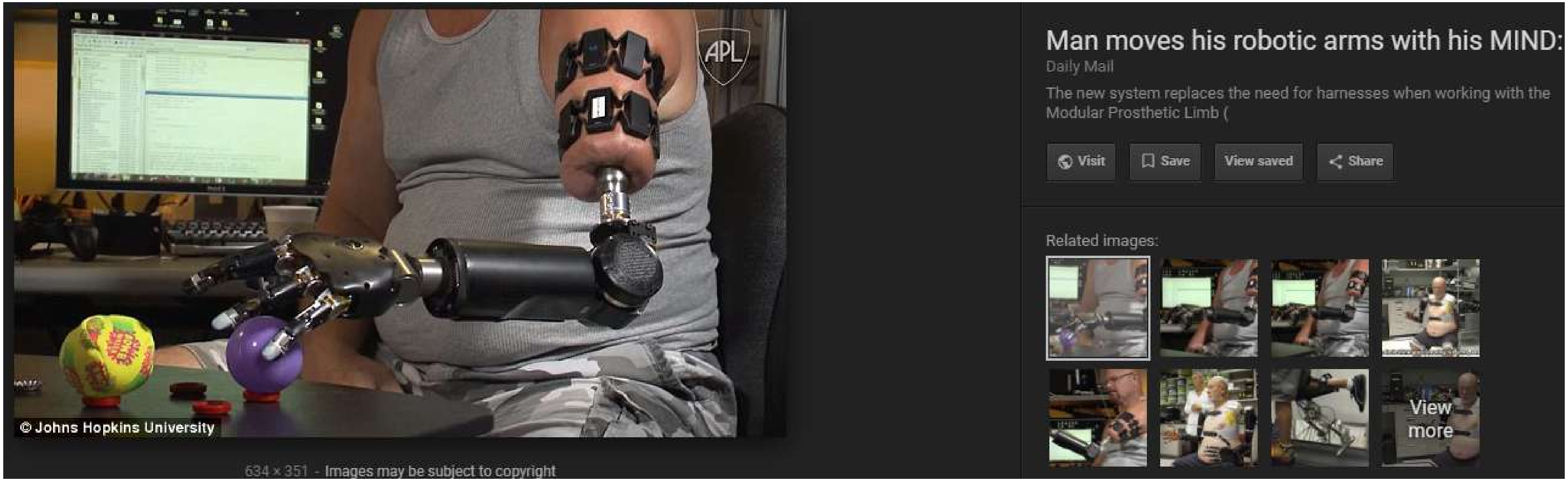


MARK OF THE BEAST 666 TECHNOLOGY IS HERE



He causes all, both small and great, rich and poor, free and slave, to receive a mark on their right hand or on their foreheads, 17 and that no one may buy or sell except one who has the mark or the name of the beast, or the number of his name.

Revelation 13:16, 17



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634 × 351 - Images may be subject to copyright
Man moves his robotic arms with his MIND:
Daily Mail
The new system replaces the need for harnesses when working with the Modular Prosthetic Limb (
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There's a new gadget called the "Microwave Regenerative Converter" from Nihon Dengyo Kosaku Co Ltd that

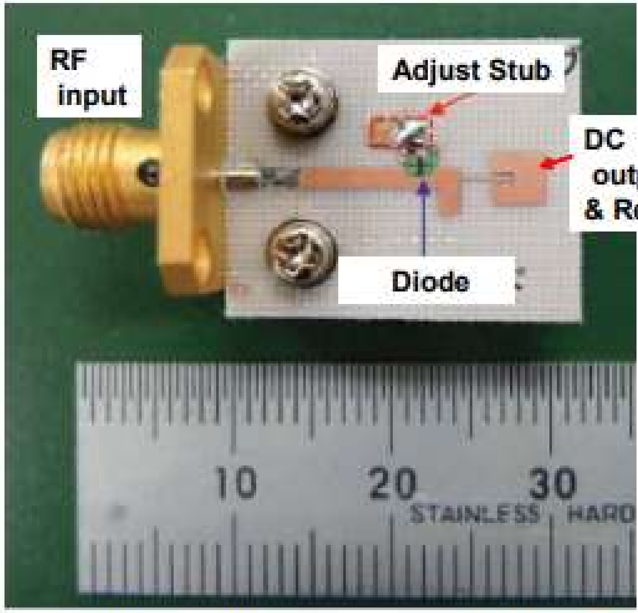


Fig.7: Revised low power 24GHz rectenna

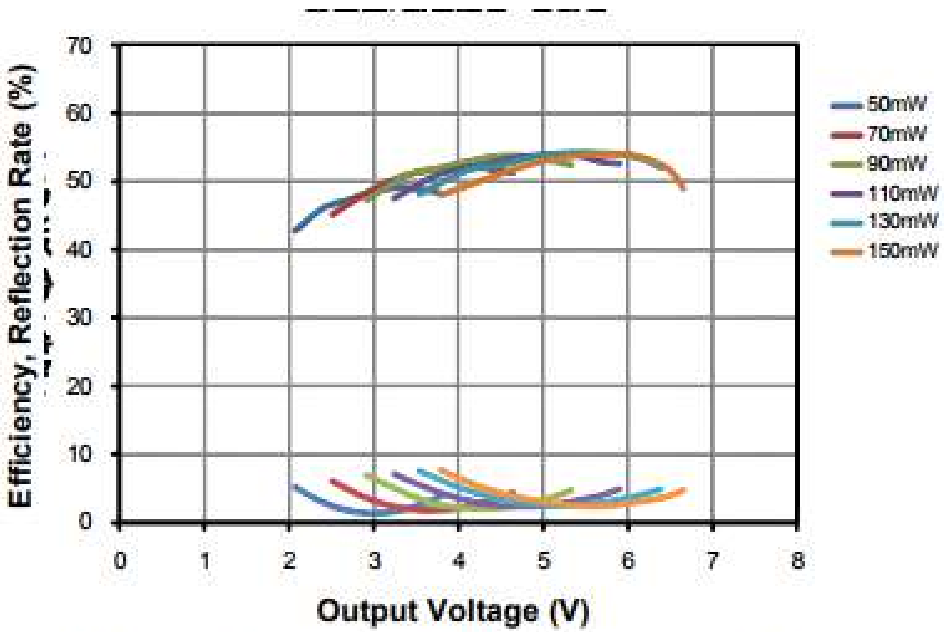
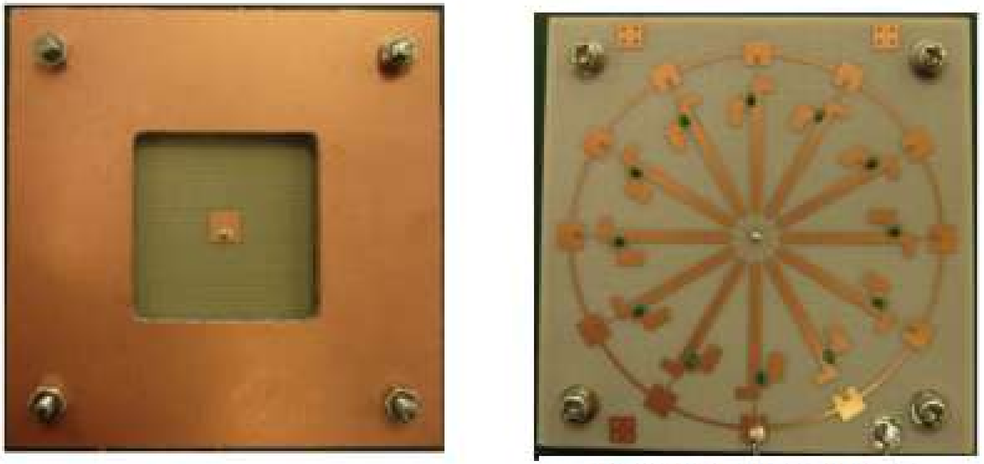


Fig.8: RF-DC conversion efficiency of revised rectenna



Antenna (Front)

12-way Power Divider
+ 12 Rectifying Circuits (Back)

Fig.9: High power 24GHz rectenna

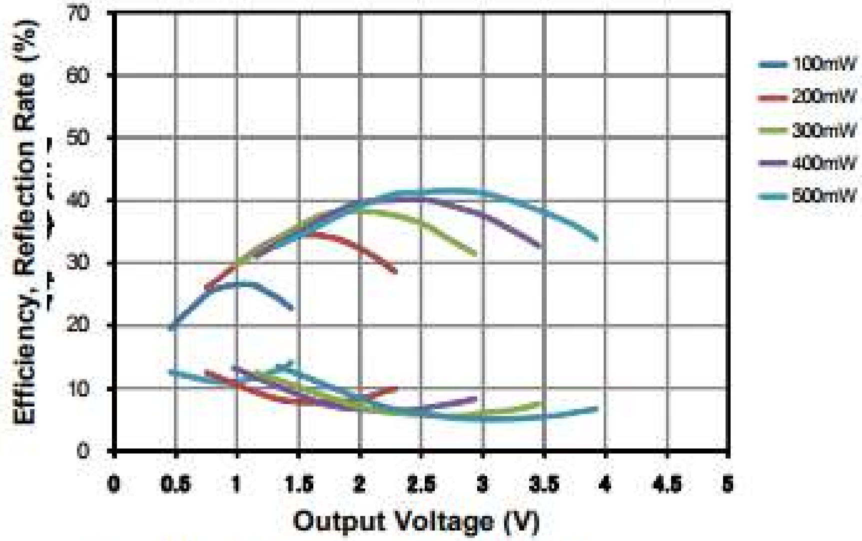


Fig.10: RF-DC conversion efficiency
of high power rectenna

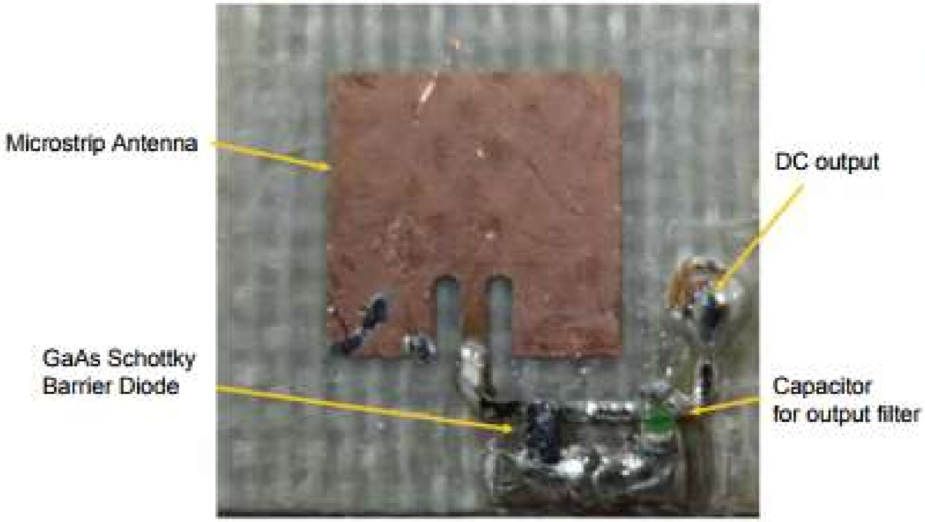


Fig.3: ordinary power rectenna at 24GHz

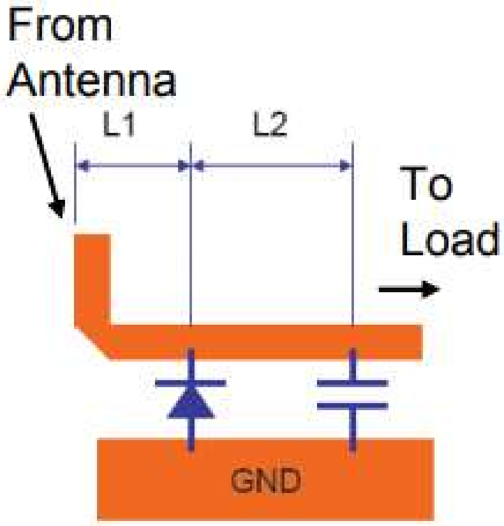


Fig.4 Rectifying Circuit

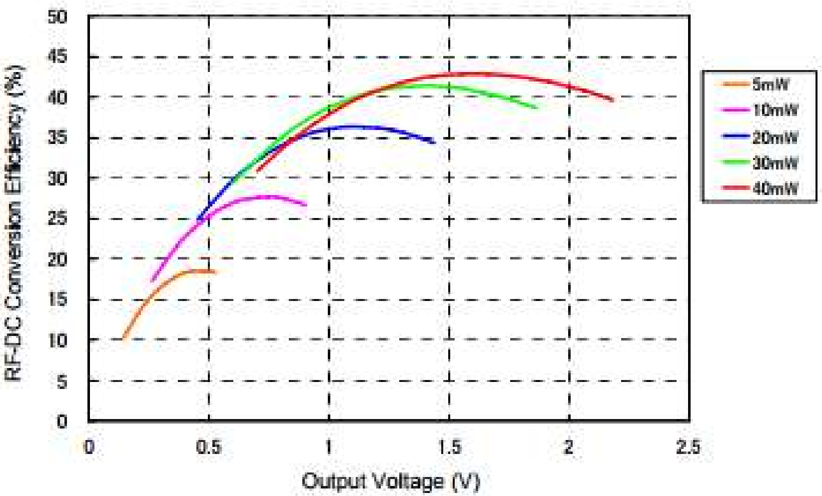


Fig.5: RF-DC conversion efficiency of ordinary power 24GHz rectenna

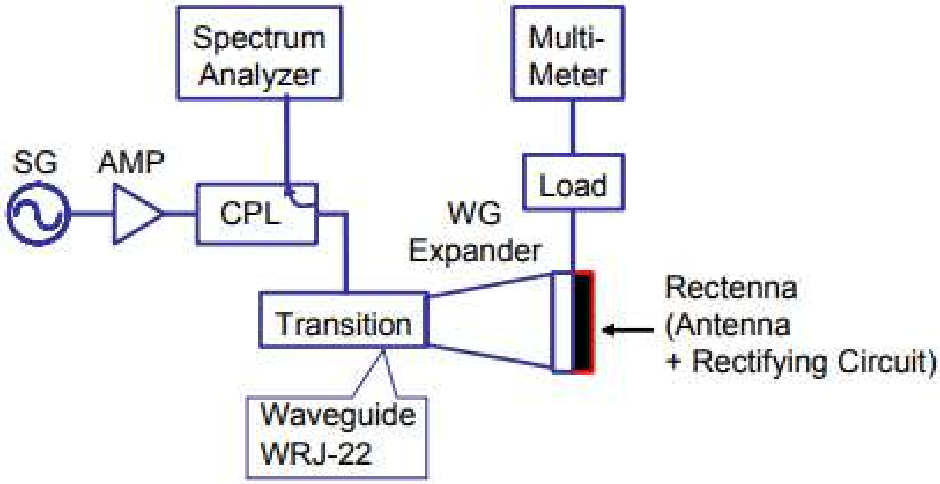
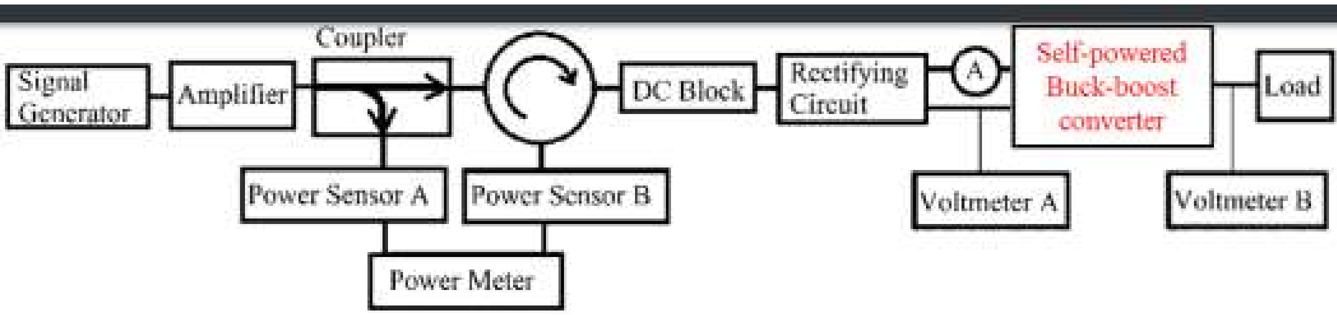
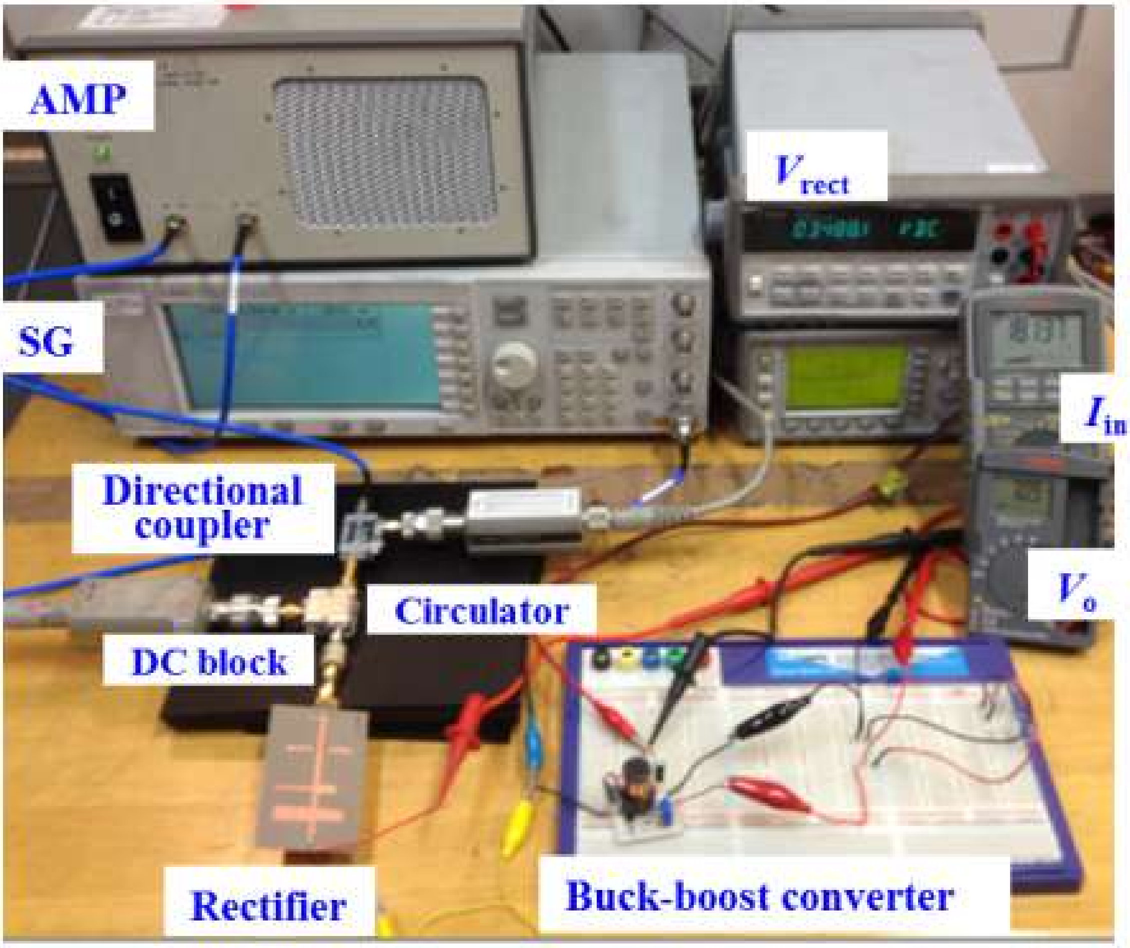


Fig.6 Measurement Setup



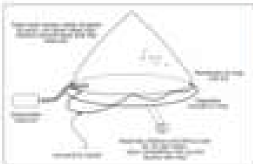
(a)



(b)

Figure 4.12: Experiment setup for measuring the efficiency of the self-powered RF-DC-DC circuit. (a) Experiment setup. (b) Experiment photograph.

Aquamate Solar Still



Manufactured to ISO 9002
NATO Stock no. 4610-66-144-2646
Aquamate product manufactured by Echomax

- Tear open pack for emergencies
- Easily inflated by mouth
- Lanyard fixing
- Pure water stored in separate pouch
- High visibility orange plastic
- Proven reliability
- Made to ISO 9002 with NATO stock number

Aquamate Inflatable Solar Stills are light, compact, and very easy to use. They utilize solar radiation to distill and collect pure drinking water from sea or impure water.

The still will produce 500 to 2000 ccs (1 to 4 pints) of water per day and has been used by military and civilian services throughout the world for the past 40 years.

Packs neatly away to 26 x 23 x 7cm. weighs just 1075 grams. At a fraction of the cost of a mechanical or electrical unit this is an ideal addition to the safety grab bag for any ocean going yachtsman.

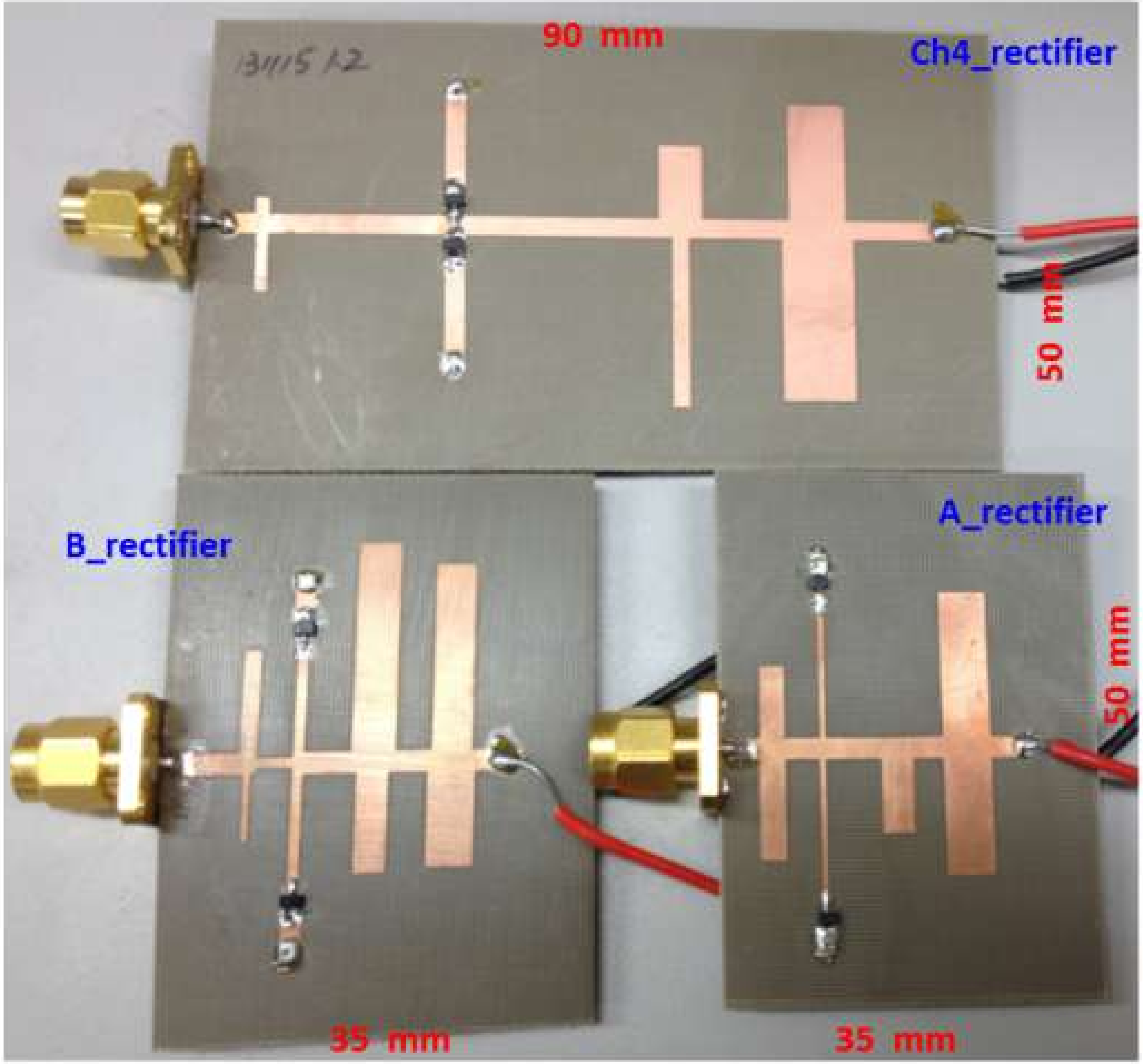


Figure 5.7: Photograph of designed rectifiers: A, B and Ch4_rectifier.

Hz

Hz = oscillation per second

Brainwave Activity — **Frequency Description**

1.600

WLAN//WI-FI/wireless Internet/network and microwave ovens transmit at the ultra high frequency 2,45 GHz which disturbs the brain's own clock frequency. WLAN pulsation varies. The frequencies of the microwave oven change the molecules and contaminate the inner and outer environment. Increasing infertility and cell mutations are the consequences.

Bluetooth technology, e.g. the wireless headset transmits with a pulsation of 1600 Hz in the frequency band 2,45 GHz (= 2450 MHz)

Mobile phones = 217 electroshocks per second into the nervous system
= the wireless society short-circuits us and we suffer from disconneXion syndrome.

217 — **"Ultra" Beta**

3G mobile phones transmit by significantly more powerful intensity and the pulsation varies. This unnatural intruder causes electrostress which "might" lead to brain stress due to the rapid pulsating electroshocks per second. We become electric and are being disconnected from the Now. The EU REFLEX study from 2003 with 12 research teams from 7 nations proved that our DNA is damaged and cell mutations occur. The results confirm the Freiburg Appeal from 2002 with more than 1.300 worried doctors, the Bamberger Appeal from 2004, and the Bamberger doctor's letter from 2006.

Cordless DECT phones = 100 electroshocks per second into the nervous system
Cordless DECT technology in private homes or in companies transmit at a frequency pulsating at 100 Hz - non-stop 24/7/365.

100 — **"Hyper" Beta**

When connected to the mains and switched on it transmits, also when it is on stand by. The intensity of cordless phones connected to traditional wired phone systems are much higher than the intensity of cell phones. The base unit equals a mobile phone antenna - just this one is often placed on bed tables or close to where people live, eat, and sleep. It disturbs our brain's centre for sleep, life energy, and recovery in the Alpha state - we burn out. **The base of the brain** vibrates at 100 Hz - but not pulsated. That is our centre for creativity adn important for spiritual development - getting to know one self. Disturbances create a chain reaction throughout the entire endocrine system and there- by cause hormonal disturbances - infertility?

50 — **"High" Beta**

The electric current in the mains oscillate at 50/60 Hz
Even the AC (alternating current) in television sets, computers and the switches in ordinary homes influence our cells in an unnatural way. The term electrostress has been known as a medical disease in several countries since at least 1969.

We are being disconnected from the wisdom of the Now by so-called knowledge
Stress, fear, anxiety, depression, and burn out constantly increase when we are bombarded with knowledge and information through all channels. We are being held in a state of "High" Beta. We become more aggressive, impatient, and short-minded. We become imprisoned in our mind - the MATRIX left brain mentality = limitation and resistance.

33 — **At 33 Hz and above nervousness, panic, and anxiety starts**

Beta

Consciousness constantly alert, increase of stress, "fight or flight mechanism"
Thinking and concentration. Alertness, analytical problem solving, tense, stress, agitation, discord, and mental unbalance. As the frequency increases we disconnect more and more from what is in the Now. The joy of Life decreases. Our joy centre in the brain vibrates at 17,5 Hz. TETRA mobile phones transmit with a pulsating frequency of 17,65 Hz which seriously disturbs the Calcium-ion flow in and out of the cells of the brain.Police and rescue services all over Europe are destined to use TETRA systems.

13 — **Alpha** & omega

Responsibility and action = always in the Now = Flow. Accept is the first step
Living in the Now is the key to understanding and new consciousness. A state of calmness. Light awareness and alertness. Increased learning ability and sensitiveness. A state of Unity between body and Spirit. It is a relaxed, harmonious, energized awaken state like a light meditation. We are aware and present in the Now in Alpha - den real world. The Limbic Centre in the brain vibrates with 12,5 Hz - it is the centre for sleep. Life energy, healing, and recovery. The limbic centre is closely related to our feelings. **The Pineal Gland** is the superior gland in the brain. It vibrates at 10 Hz being the frequency for our nerve and time centre. The Pineal Gland produces the transmitter Melatonin which controls and regulates the other hormone producing glands and the

7 — **Theta**

immune system. Melatonin is particularly being produced at night where we are asleep. Darkness and silence are both very important factors. Melatonin has a protecting effect against cancer. The Pineal Gland is very sensitive towards electromagnetic influences. Both light and sounds are electromagnetic signals at different frequencies. Microwaves affect all cells and especially the Pineal Gland. Imbalance in the Pineal Gland causes increased mental activity which "might" lead to burn out syndrome.

Meditative state. Deep relaxation. Increased creativity and vivid imagination. Access to what is normally unconscious potential. Connected-ness in general is acknowledged in a wider context. Being able to connect-the-dots of the "big picture".

3 — **Delta**

Regeneration and harmonious balance. The frequency band 3-12,5 Hz is the vitality "field". We "recharge", recover, and maintain homeostasis - the dynamic balance that keeps us alive. Our immune system strengthen, and our sleep is invigorating. In this field we get energy, Life force, and the power needed for a modern Life style.

Very deep relaxation. Deep sleep. Trance. Deep hypnosis.

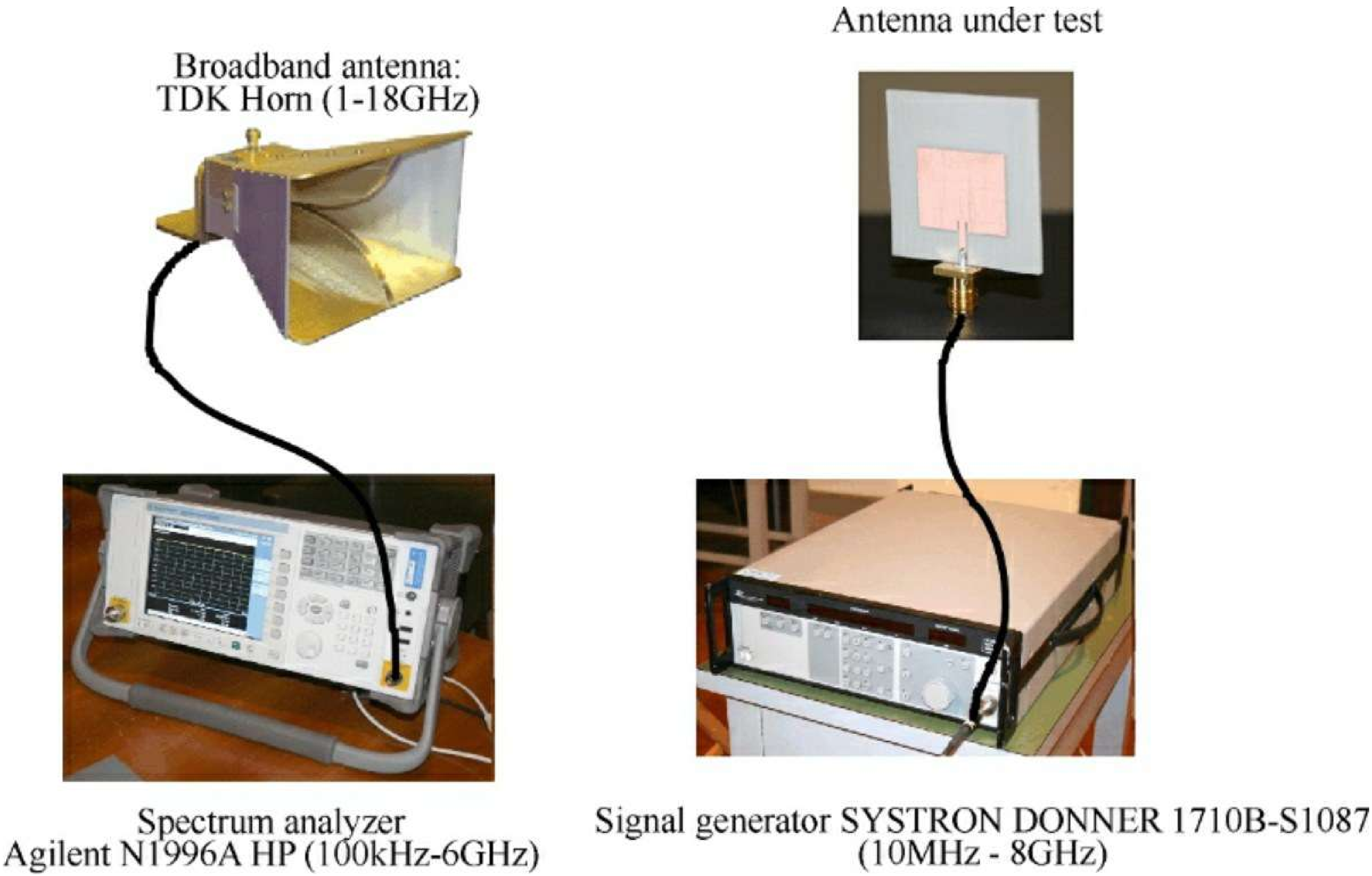
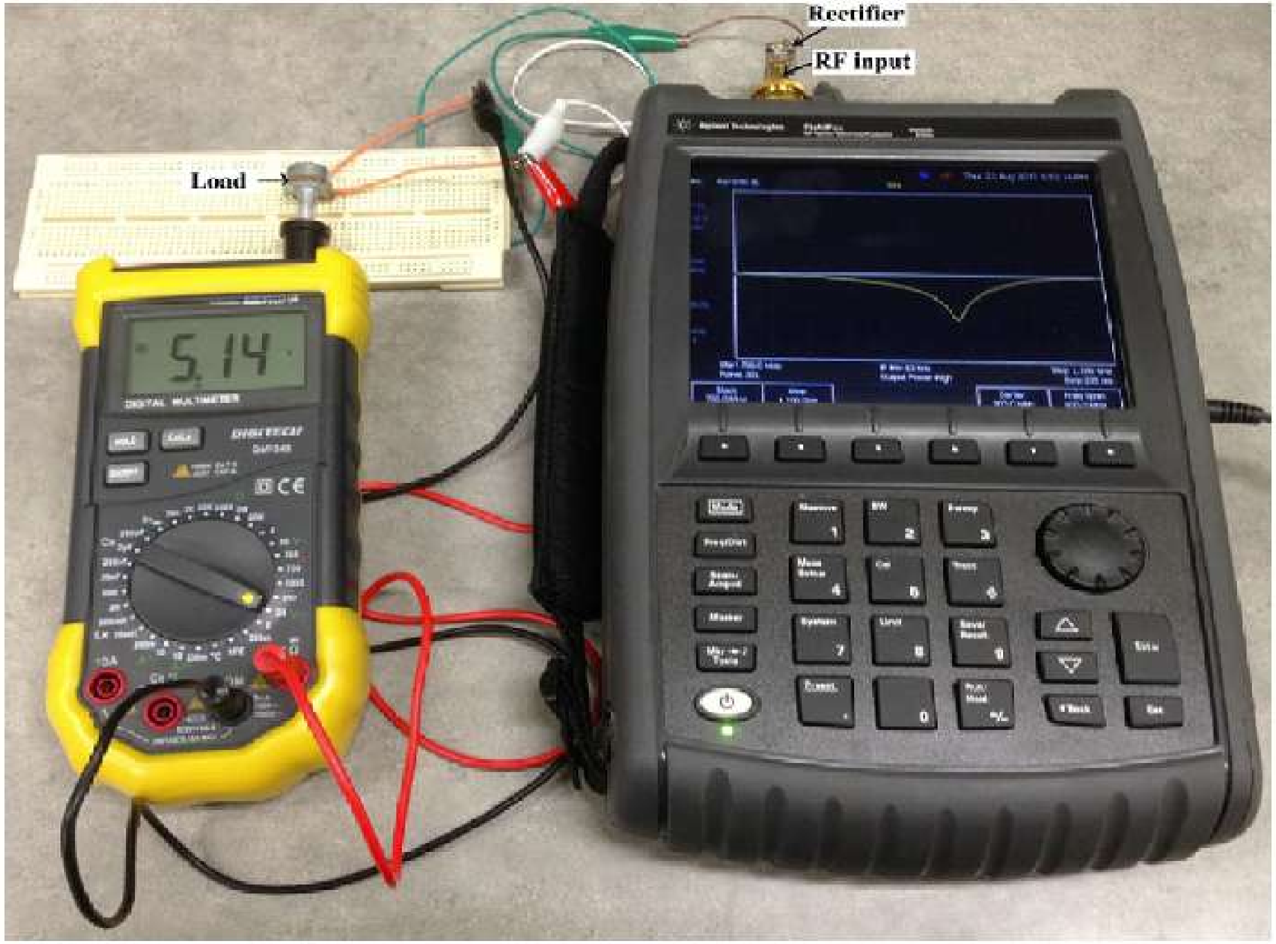

Antenna under test
Broadband antenna:
TDK Horn (1-18GHz)
Spectrum analyzer
Agilent N1996A HP (100kHz-6GHz)
Signal generator SYSTRON DONNER 1710B-S1087
(10MHz - 8GHz)

Fig. 6 Experimental setup to measure the performance of the rectifier in free space



RF rectifiers for EM power harvesting in a Deep Brain Stimulating device

Article Jan 2015 · Australasian physical & ...

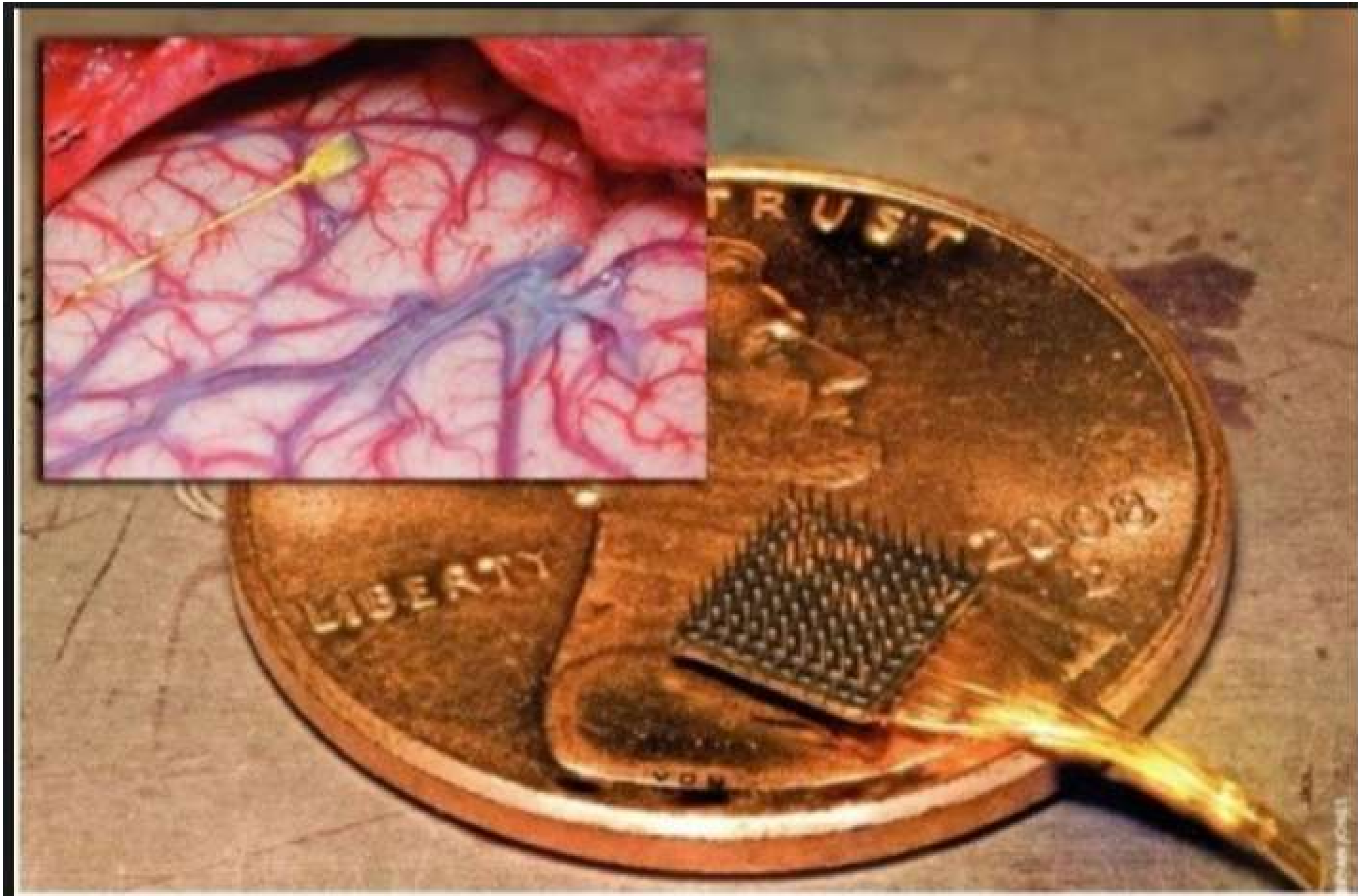
Md. Kamal Hosain · Hosain @bullet · Abbas Z. Kouzani · [...] · Michael Berk

Citations

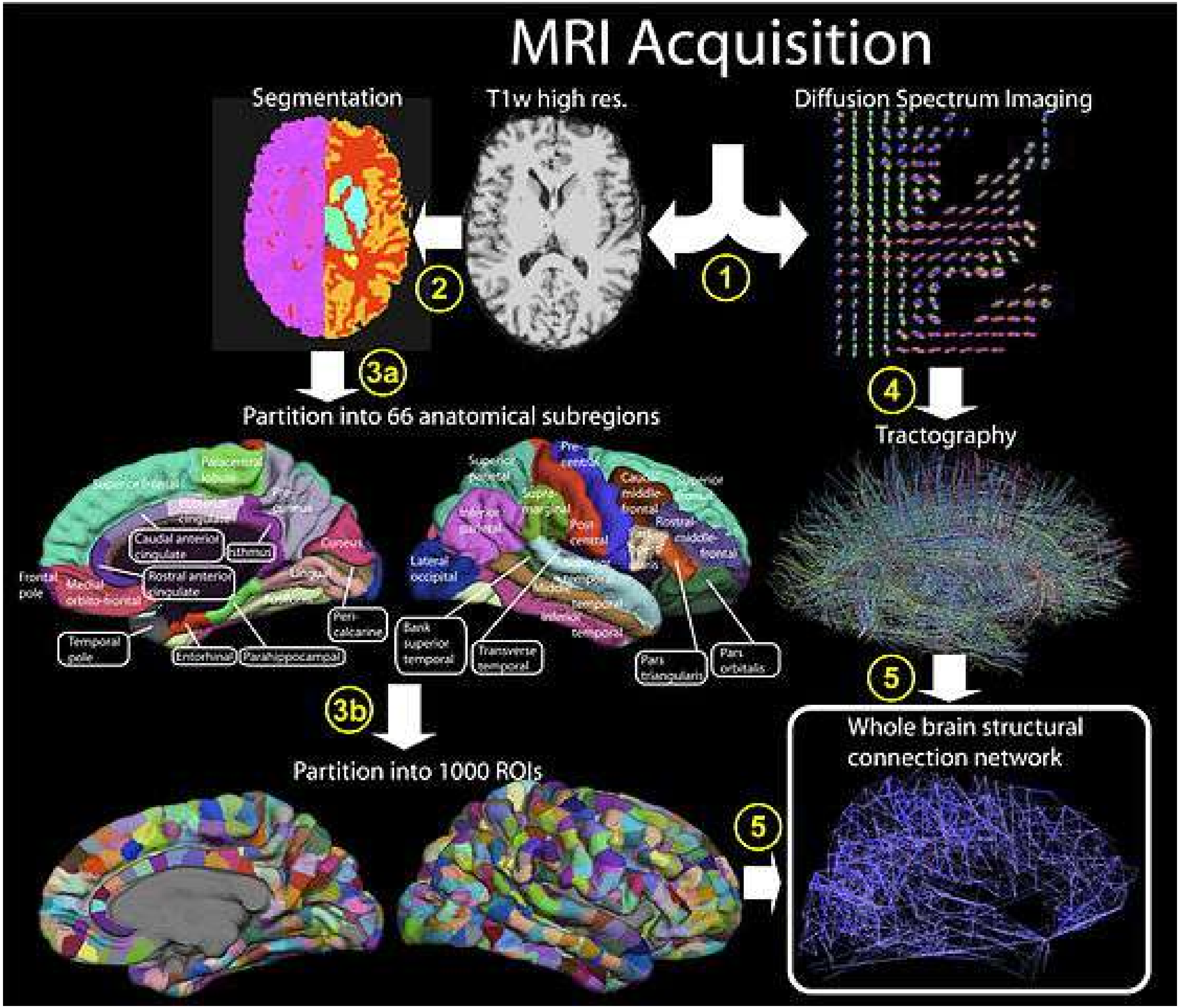
... The use of resistance compression networks (RCN) have been proposed to address this scenario [63]. In a related sense, improved RF-DC conversion efficiency of rectifier circuits is witnessed when appropriate time varying signals with high peak-toaverage power ratio (PAPR) are employed [64]. Further research on the use of RCNs and PAPR signals to optimize the performance of multiband RF energy harvesting systems is needed, and is potentially promising to significantly improve the performance of RF rectennas in real world applications. ...

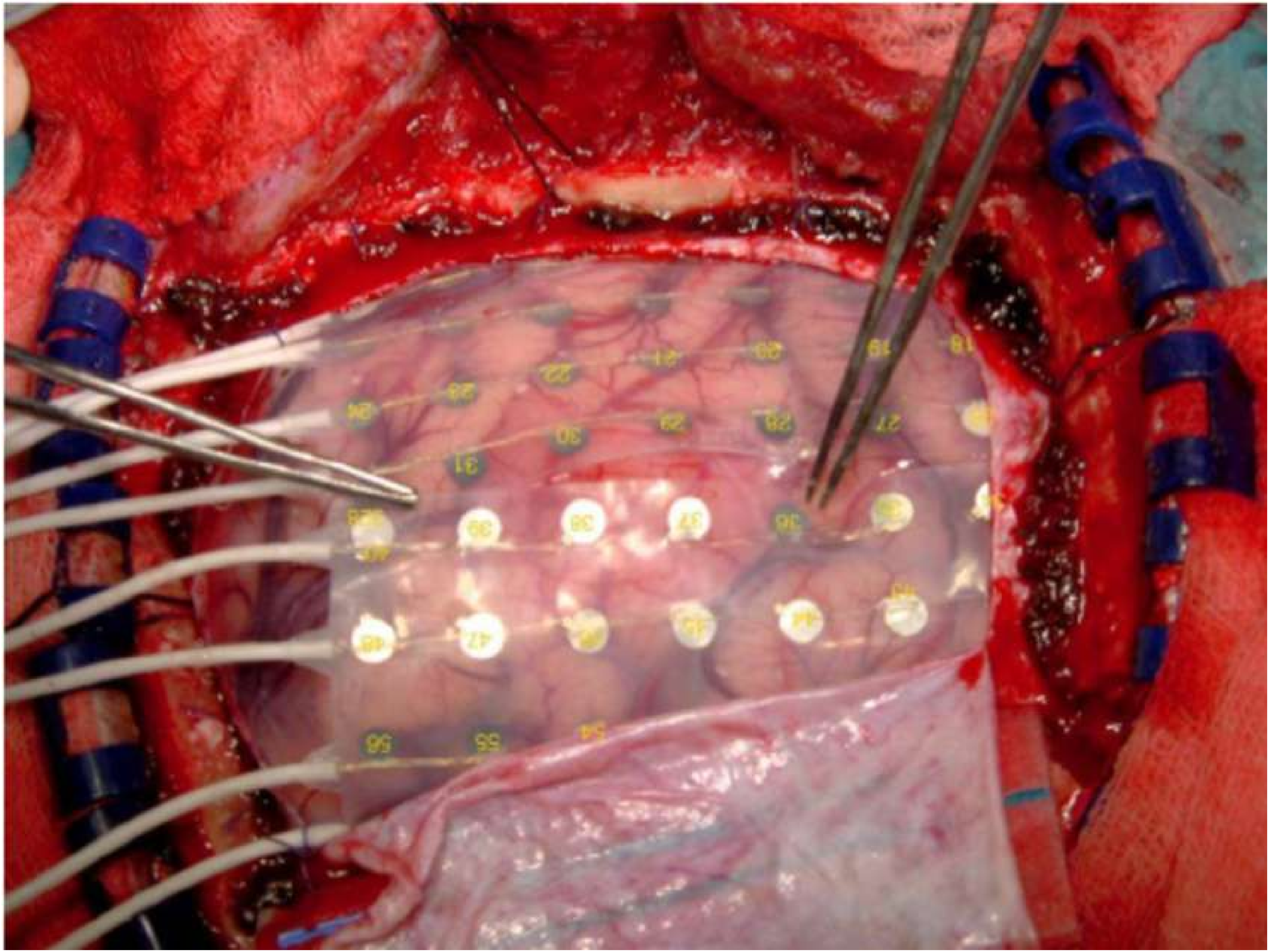
Radio Frequency Energy Harvesting

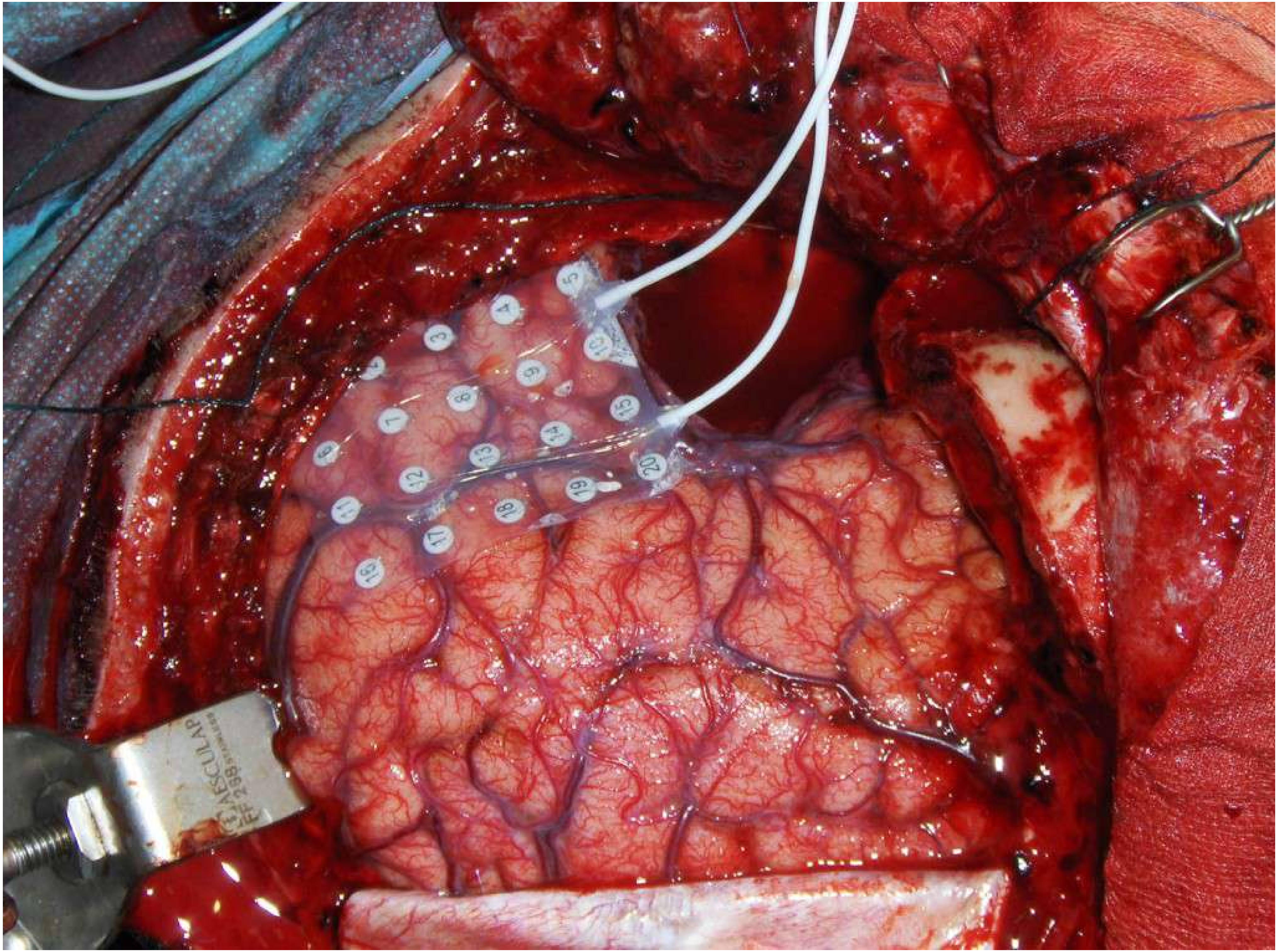

SUBSCRIBE

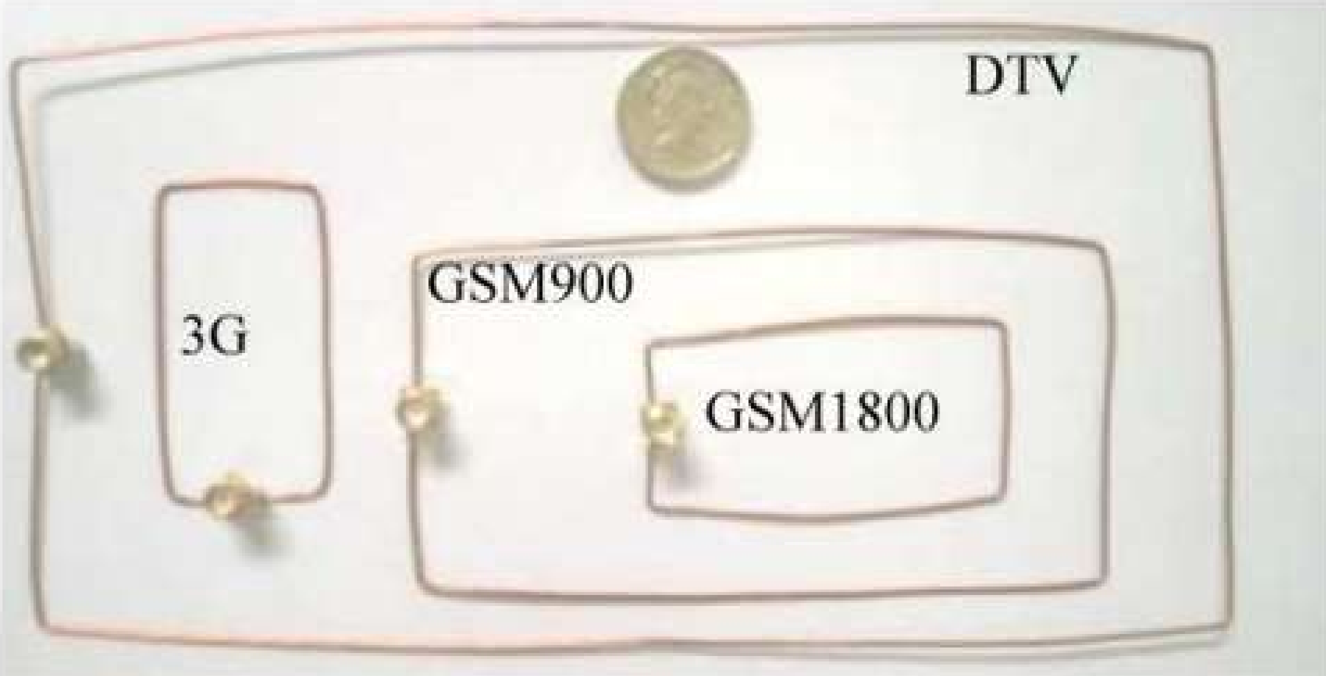


Thought control: The Utah Electrode Array can be implanted on a human brain. For a podcast and more photos, go to CityWeekly.net.

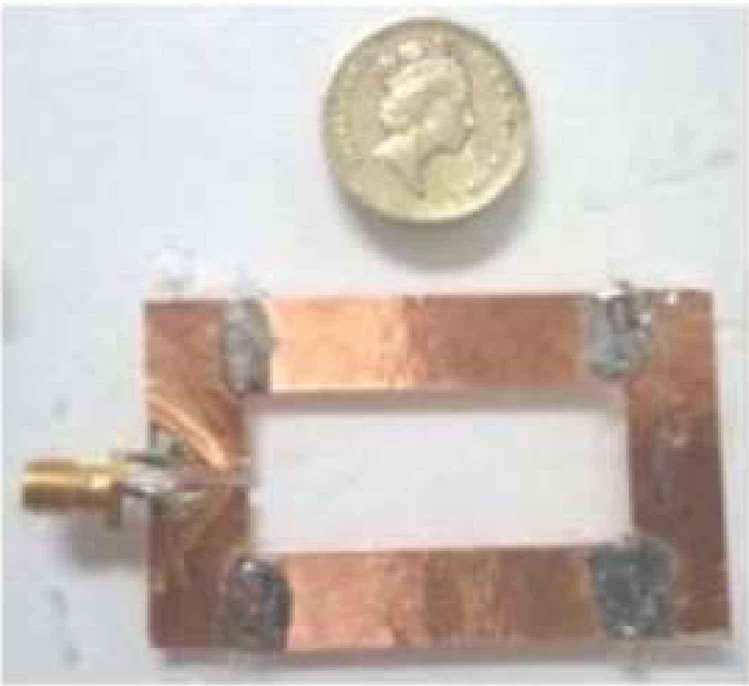

MRI Acquisition
Segmentation
T1w high res.
Diffusion Spectrum Imaging
1
2
3a
4
Partition into 66 anatomical subregions
Tractography
Caudal anterior cingulate
Isthmus
Rostral anterior cingulate
Frontal pole
Medial orbito-frontal
Temporal pole
Entorhinal
Parahippocampal
Peri-calcarine
Cuneus
Lateral occipital
Bank superior temporal
Transverse temporal
Pars triangularis
Pars orbitalis
Rostral middle frontal
Caudal middle frontal
Superior parietal
Supramarginal
Post central
Pre central
Inferior temporal
5
3b
Whole brain structural connection network
Partition into 1000 ROIs
5




AESCULAP
FF 268

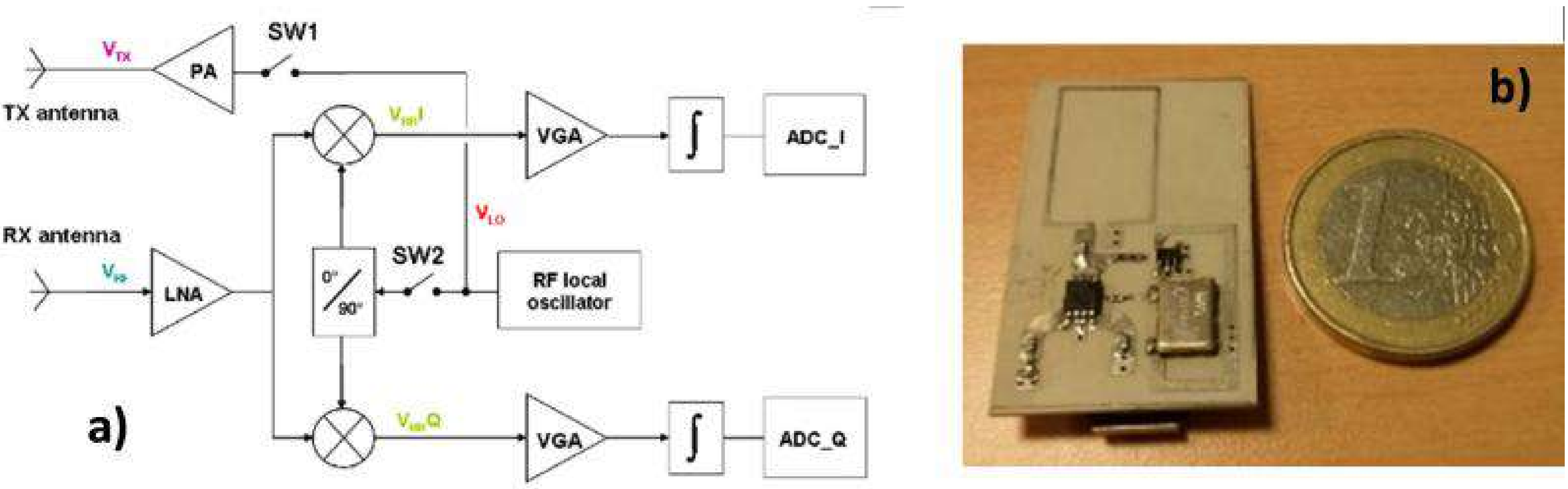


(a)

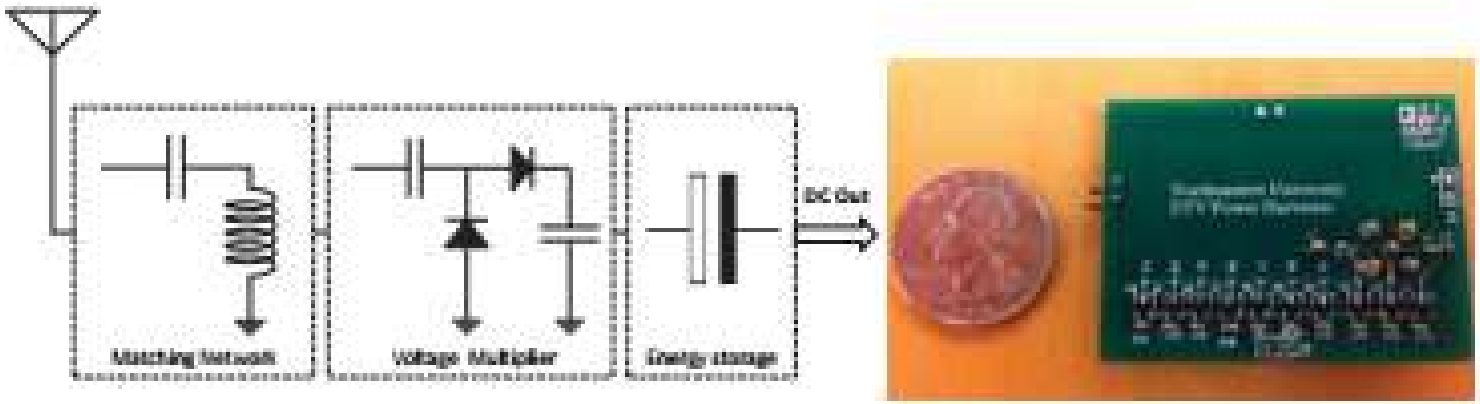


(b)

Fig. 3. 50-Ω folded-dipole antennas shown next to a British £1 coin. (a) DTV, GSM900 (BTx), GSM 1800 (BTx) and 3G (BTx) copper wire antennas. (b) 3G



TX antenna
PA
SW1
RX antenna
LNA
0°
90°
SW2
RF local
oscillator
VGA
VGA
ADC_I
ADC_Q
a)
b)



(a) (b)

Fig. 1. Ambient RF energy harvesting (a) and RF energy harvesting module (DTV band) (b)

Design – Physical System

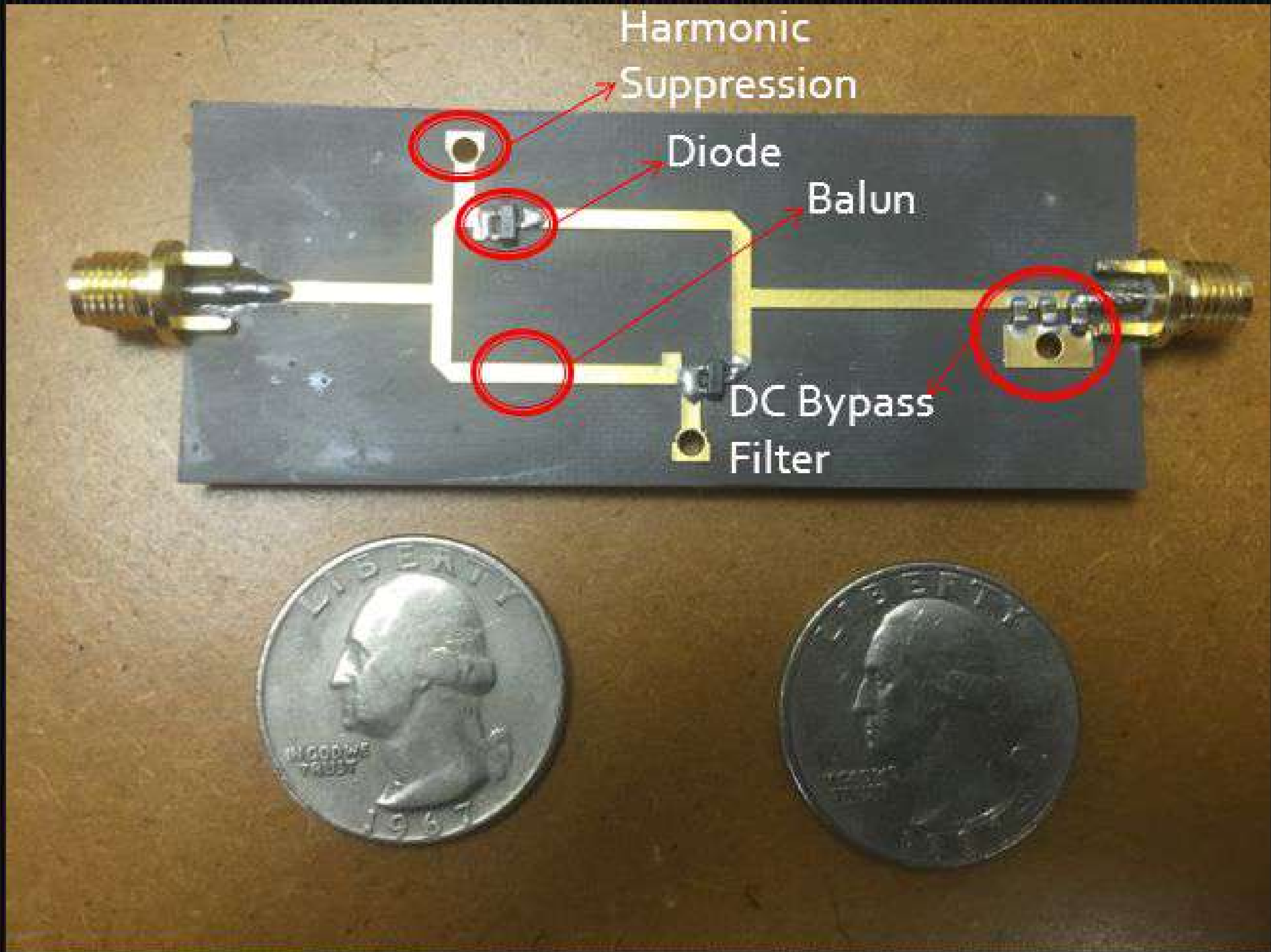


Fig 5. RF to DC converter

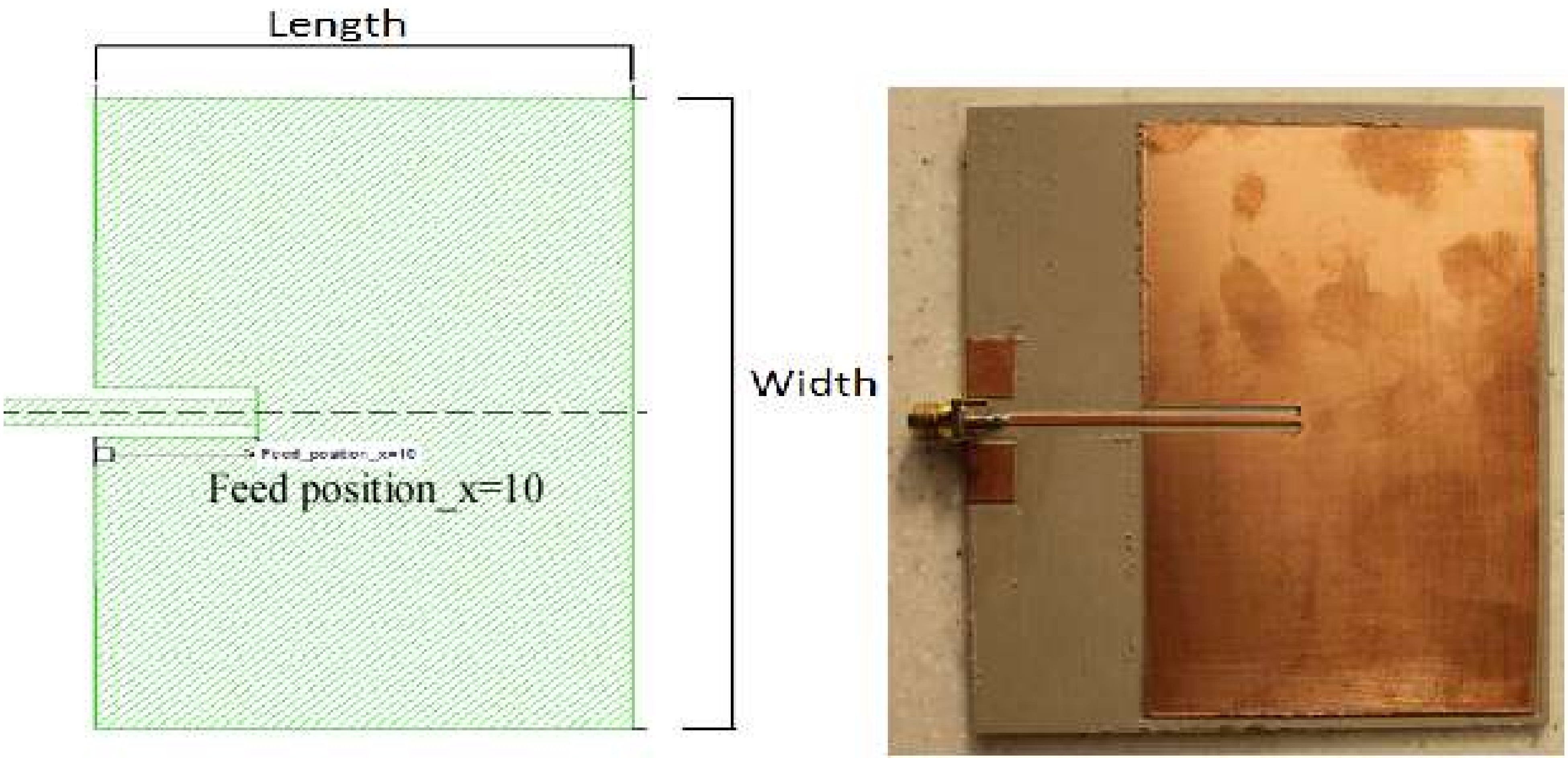
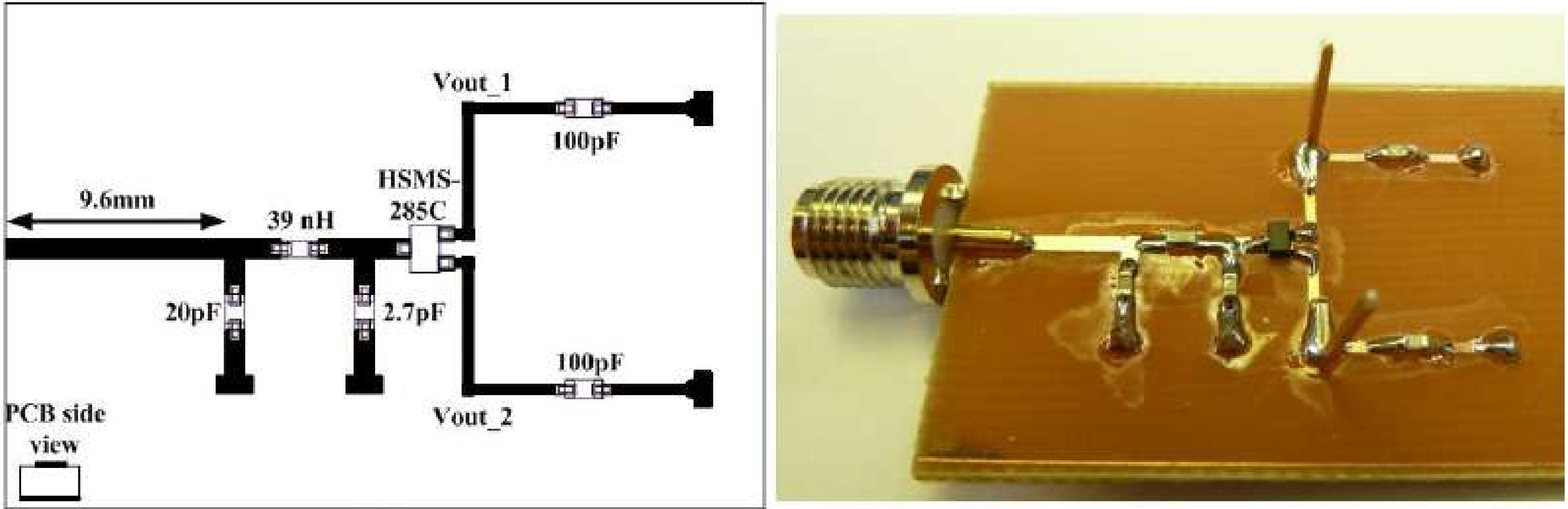
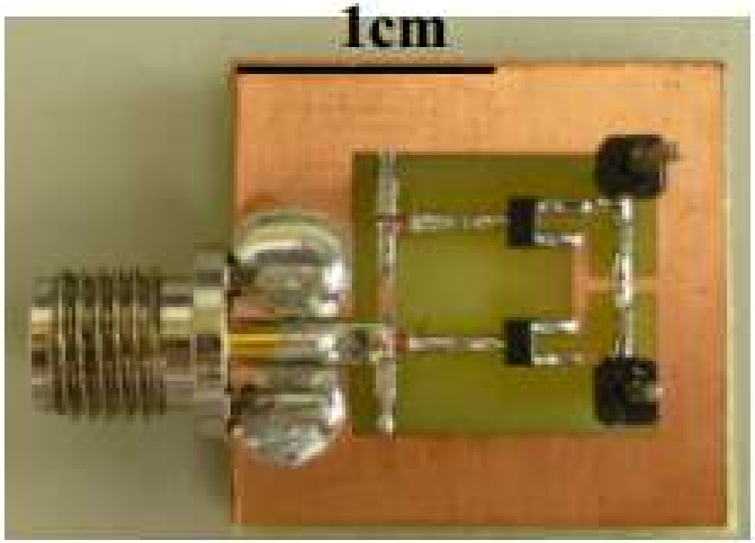


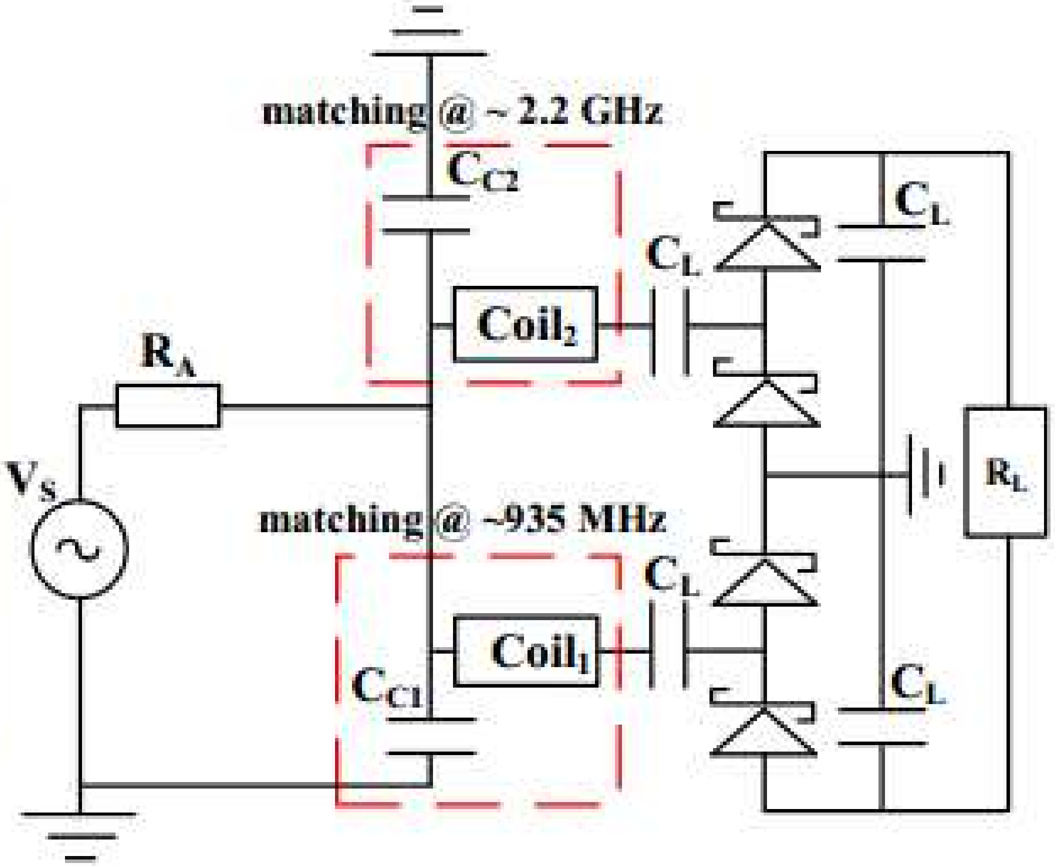
Fig. 3. RF Energy receiving antenna layout and manufactured prototype

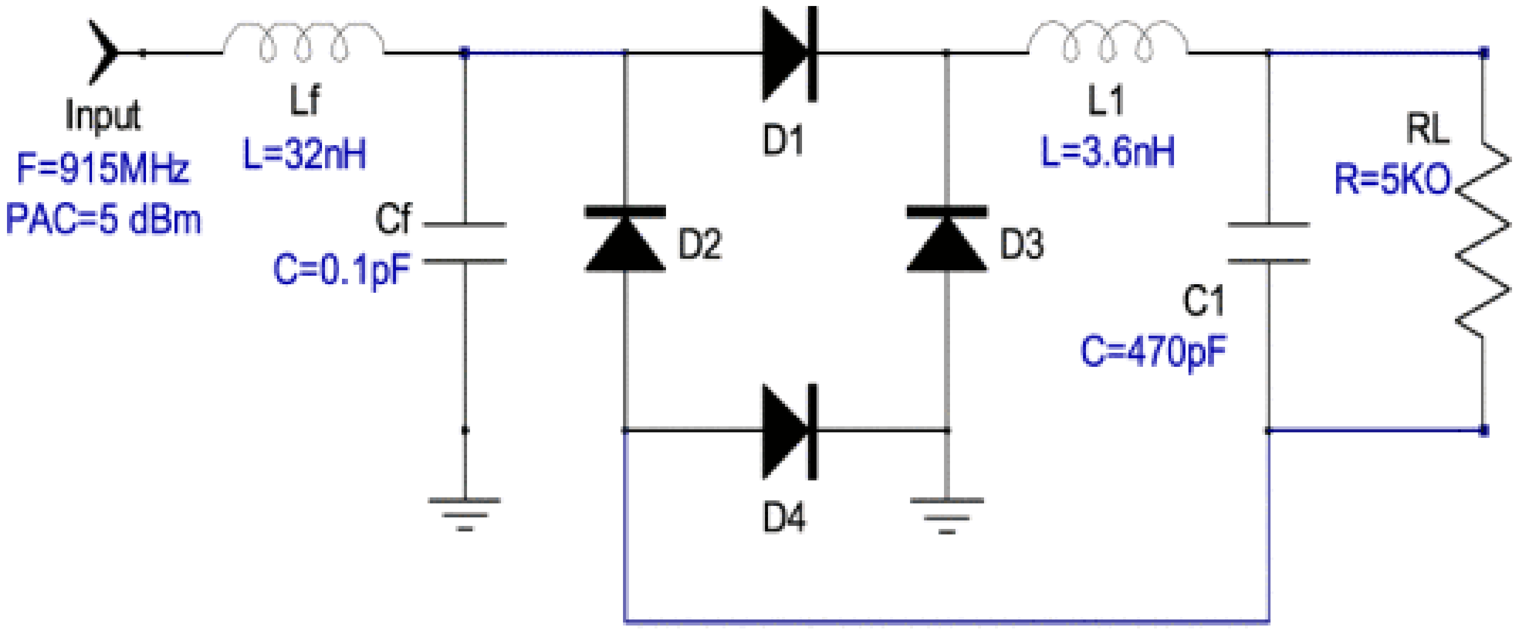
Fig. 3. RF Energy receiving antenna layout and manufactured prototype


Vout_1
100pF
HSMS-
285C
9.6mm
39 nH
20pF
2.7pF
100pF
Vout_2
PCB side
view

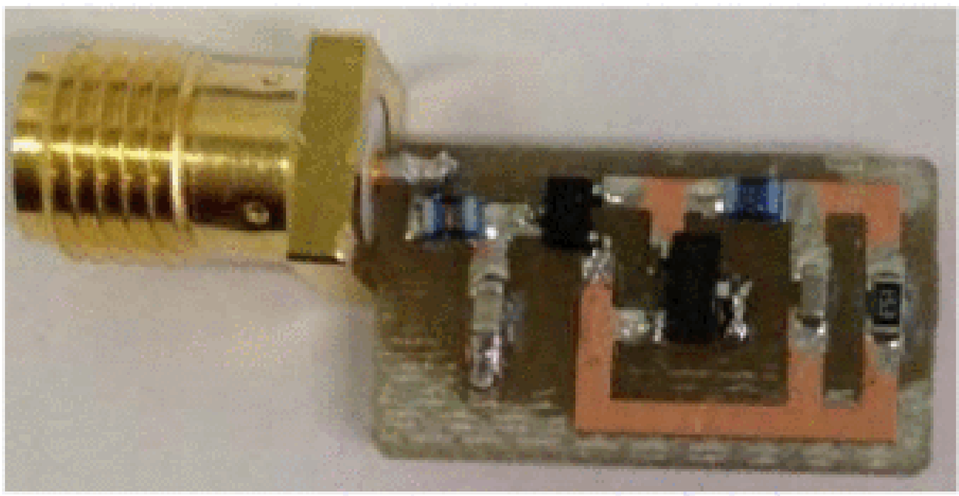
(a) (b)


1cm


matching @ ~ 2.2 GHz
C_{C2}
C_L
C_L
Coil_2
R_A
V_S
R_L
matching @ ~935 MHz
C_L
Coil_1
C_{C1}
C_L


Input
F=915MHz
PAC=5 dBm
Lf
L=32nH
Cf
C=0.1pF
D1
D2
D3
D4
L1
L=3.6nH
C1
C=470pF
RL
R=5KO

(a)



(b)

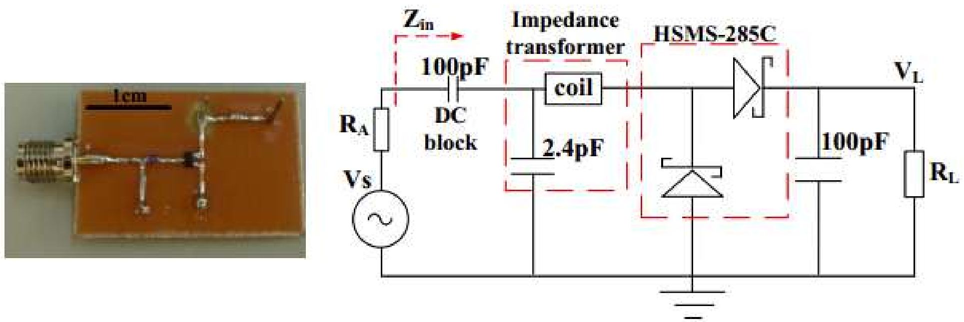


Figure 4. PCB of the realized RF harvester at 930MHz using a HSMS-285C diode voltage doubler. The HSMS-285C has the following spice parameters I_S = 3μA, C_j = 0.18pF and R_S= 25. *Coil* = 38.5nH at 900MHz with a Q_u of 69. The chip capacitors have Q_u of about 1000 at 900MHz.

clc

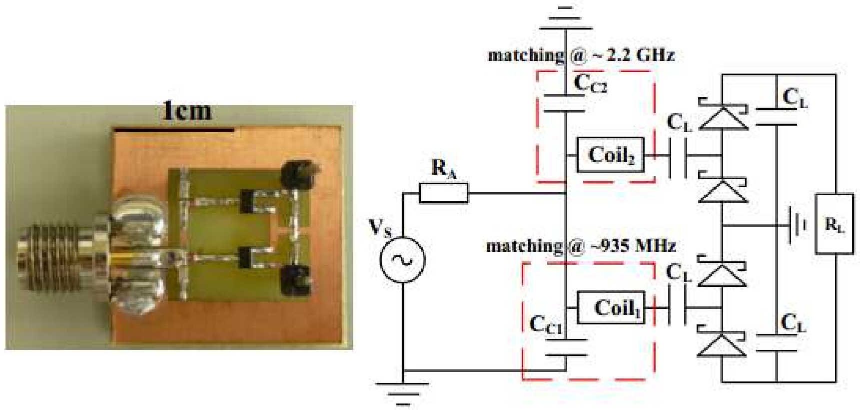


Figure 6. Picture and circuit layout of the dual-band RF harvester. The harvester is matched at 935MHz and 2.2GHz. Schottky diodes are HSMS-285x series. C_{C1}=2.7pF, $Coil_1$ =39nH; $Coil_1$ Q_U @ 900MHz =88, C_{C2}=0.8pF, $Coil_2$ =2.14nH; $Coil_2$ Q_U @ 1.7GHz =35, C_L=100pF.

Fig. 14 a Two-stages charge pump rectifier with a L-matching network. b Fabricated L-matched two-stages charge pump rectifier

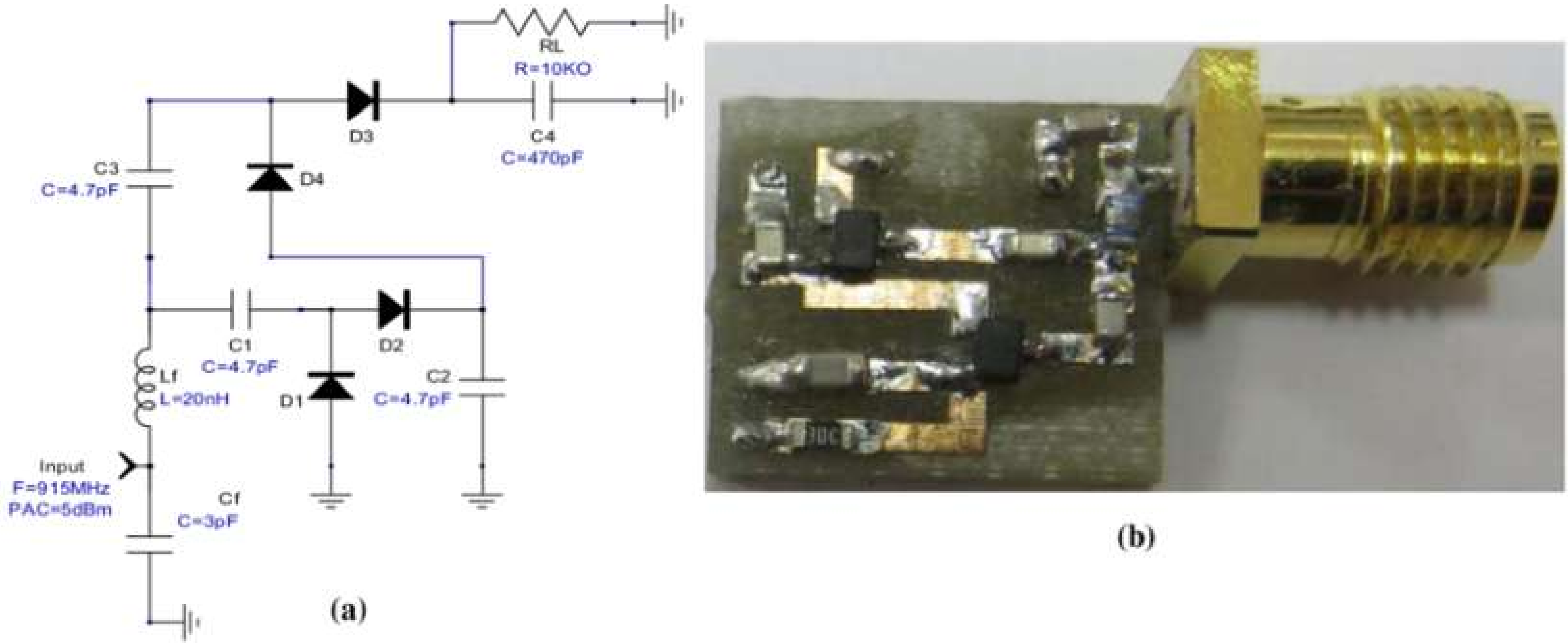
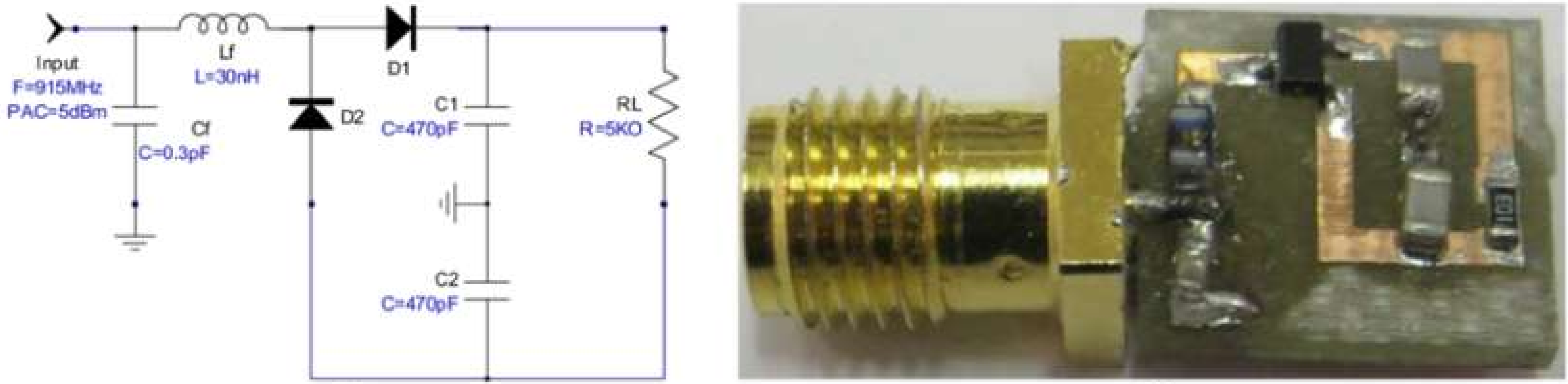


Fig. 4 a Delon voltage doubler rectifier with an L-section matching network. b Fabricated PCB of the L-section matched Delon voltage doubler rectifier



(a) (b)

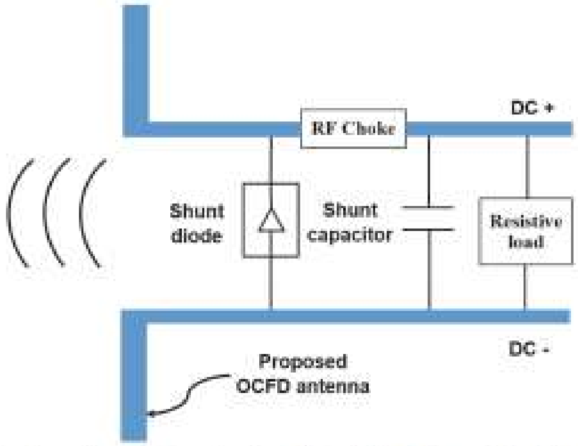


Fig. 9. Configuration of a single shunt diode (Class F) rectifier with a dipole antenna.

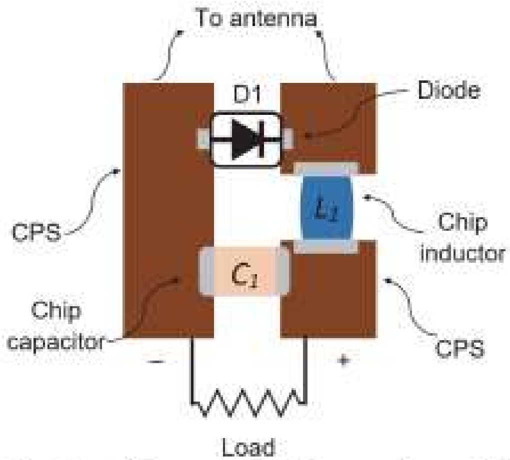


Fig. 10. Configuration of the proposed rectifier on coplanar striplines (CPS).

TABLE III
CIRCUIT COMPONENTS USED IN THE DESIGN

Component name	Nominal Value	Part number and supplier
D1	Schottky diode	SMS7630-079LF, Skyworks
L1	47 nH chip inductor	0603HP47N, Coilcraft
C1	100 nF chip capacitor	GRM188R71H104JA93D, Murata

antenna have a radius of 50 mm and a circumference angle of

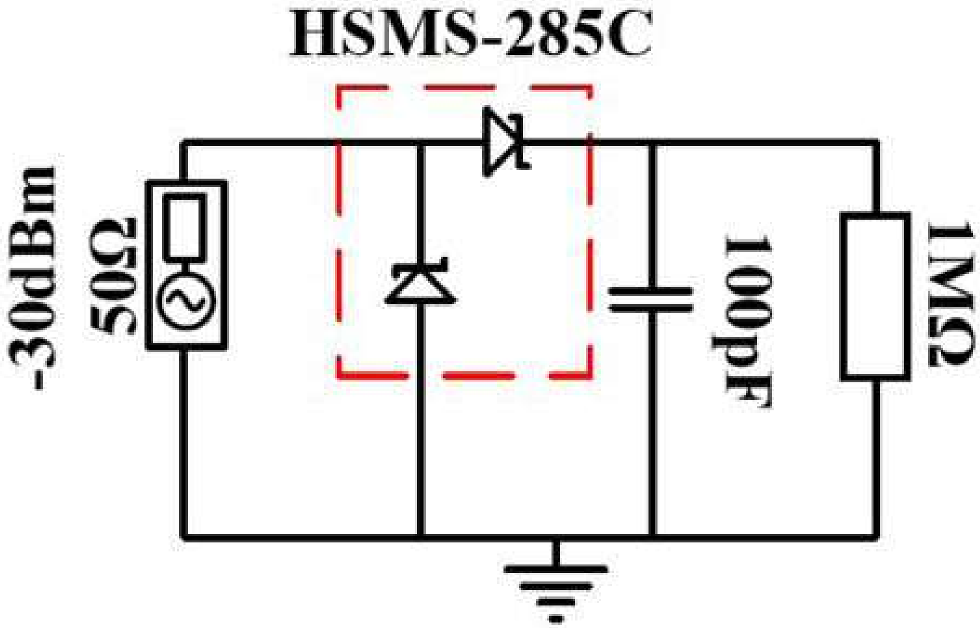
respectively. While the imaginary part of the proposed OCFD is around 0 Ω at resonant frequencies 0.6 GHz, 1.2 GHz and 2.4 GHz, which are f_0, $2f_0$, and $4f_0$ respectively. These results have demonstrated that the simulated results agree with the OCFD theory as discussed in Section III–A. Furthermore, the imaginary part of the impedance of the antenna over the resonant frequency band from 1.4 to 2 GHz turns from negative values (for the reference antenna) to positive values (for the proposed antenna). As shown in Fig. 7(b), the value of the imaginary part of the proposed antenna impedance varies between 0 and 300 Ω over the desired frequency band. This feature could help the proposed antenna to produce a better conjugate matching with the rectifier, since the imaginary part of the impedance of the rectifier normally varies between -700 and 0 Ω as we discussed earlier. The simulated 3D radiation patterns of the proposed antenna at the frequencies of interest are depicted in Fig. 8. The 2D polar plots of antenna patterns in *E-plane* and *H-plane* are shown as well. Here we have only showed the directivity (maximum gain) of the antenna (without taking the mismatch loss into account). From Fig. 8, it can be seen that the antenna has symmetrical patterns about YOZ plane with a maximum directivity of 1.8 dBi at 0.9 GHz, 3.5 dBi at 1.8 GHz and 3.3 dBi at 2.4 GHz. The antenna is more directive towards the long arm direction at 1.8 GHz and 2.4 GHz with the half-power beam-widths (HPBW) of around 174° and 185° respectively. The HPBW is about 96° at 0.9 GHz.

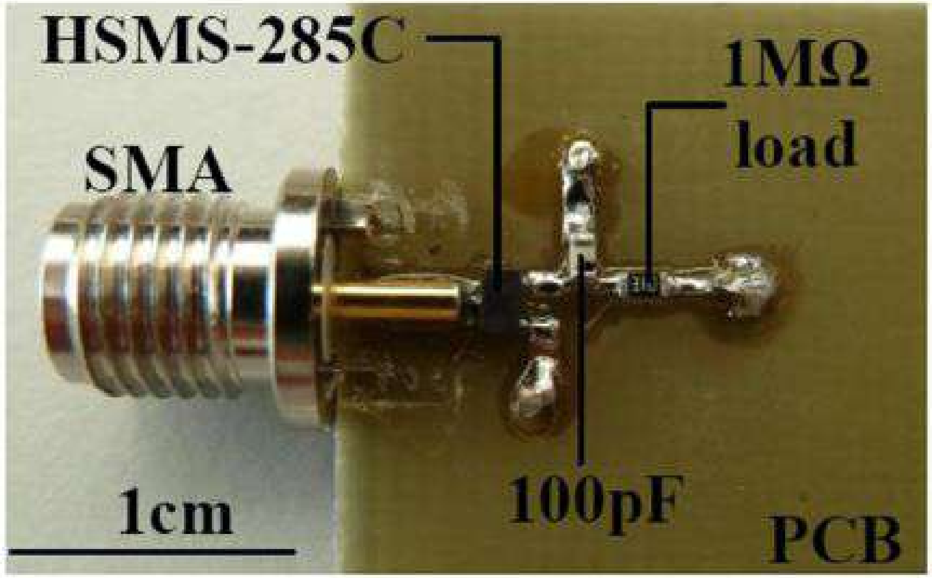
Therefore, the proposed broadband OCFD antenna has obtained high impedance over a wide frequency range. The proposed design is just an example to illustrate the proposed new method. The details of the dipole could be modified according to the frequency of interest.

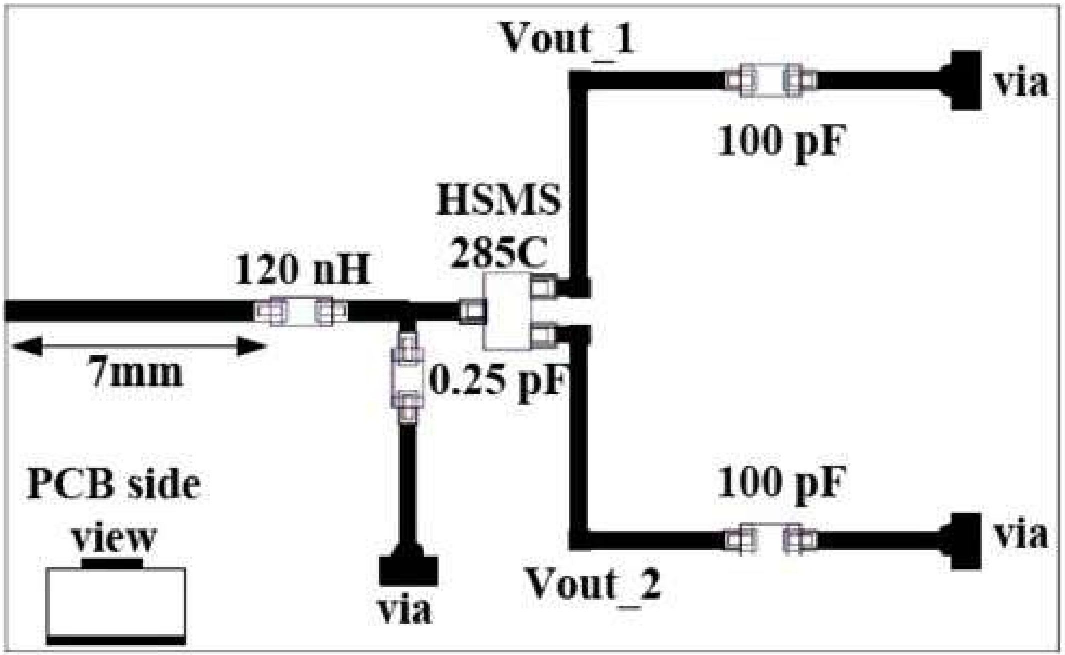
IV. RECTENNA INTEGRATION

A. Rectifier Configuration

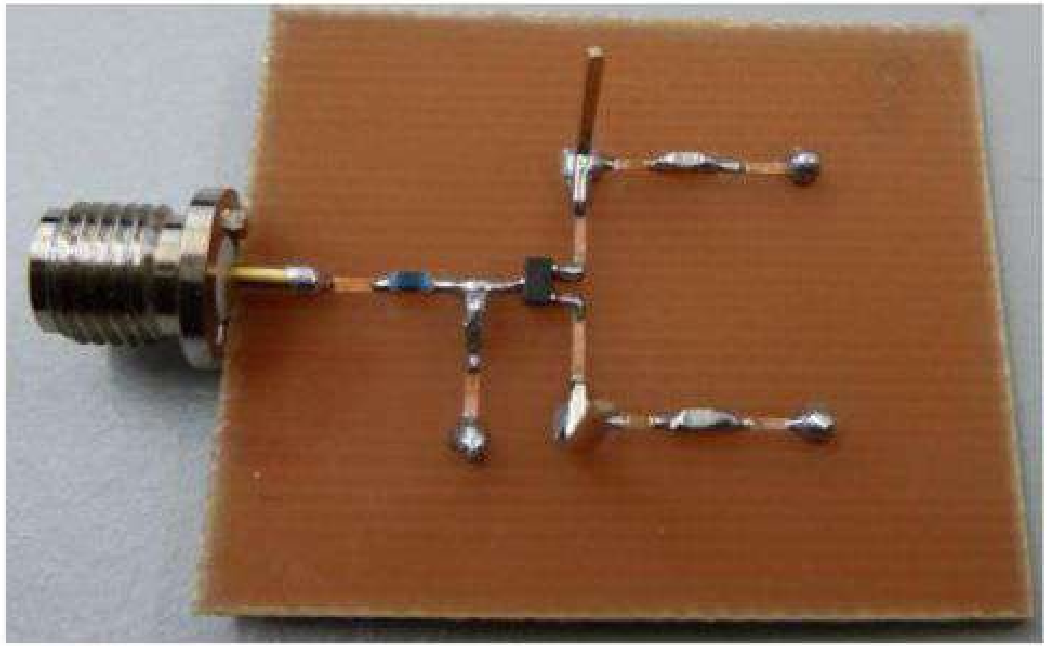
The proposed high impedance OCFD antenna may directly conjugate match with the input impedance of a rectifier over a wide frequency band. The rectifier should only consist of few circuit components for rectification, DC storage and output. A single shunt diode rectifier is selected due to its very simple structure and high conversion efficiency [33]. The configuration of the single shunt diode rectifier with a dipole


HSMS-285C
-30dBm
50Ω
100pF
1MΩ

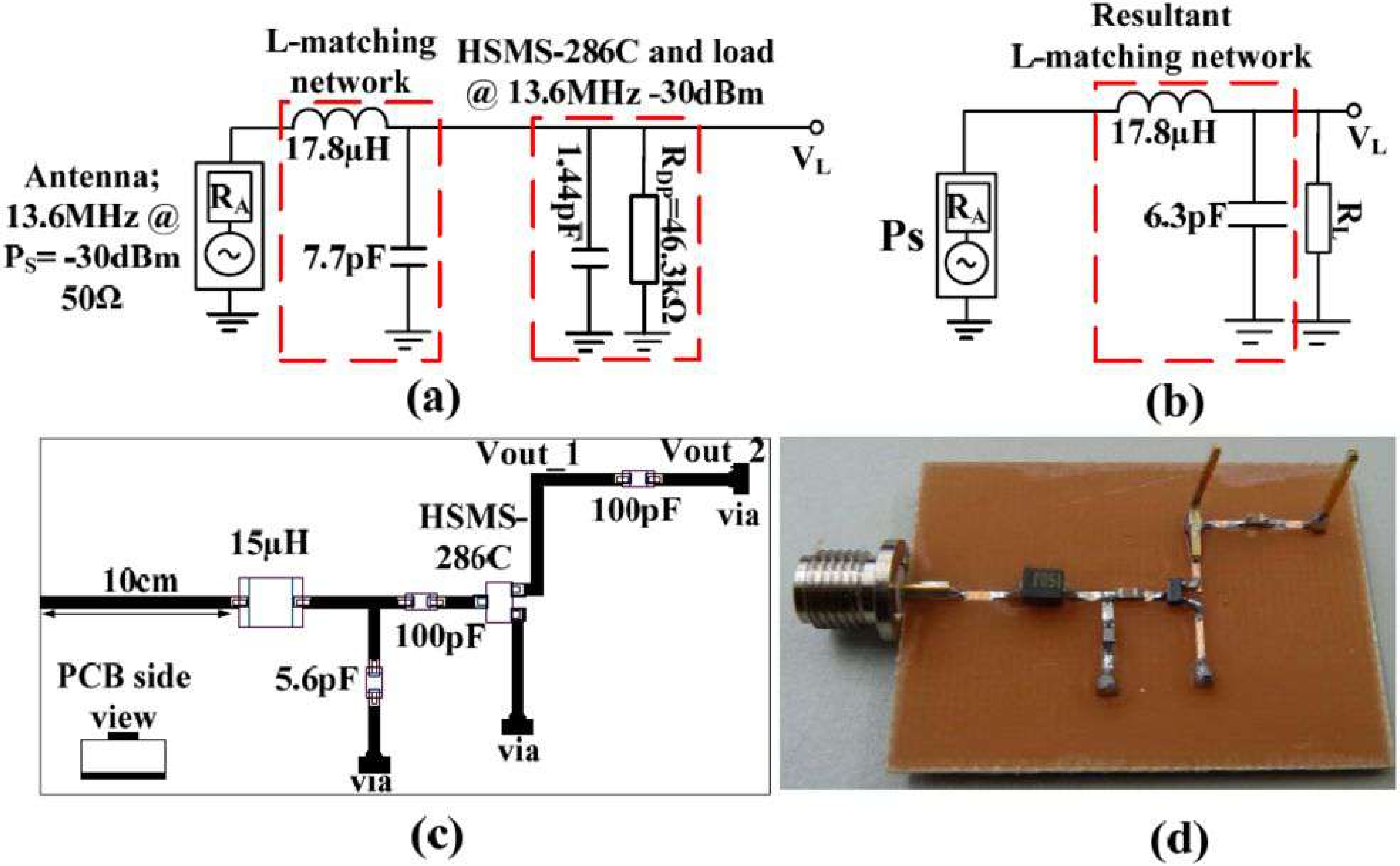

HSMS-285C
1MΩ
load
SMA
100pF
1cm
PCB


Vout_1
via
100 pF
HSMS
285C
120 nH
7mm
0.25 pF
PCB side
view
100 pF
via
via
Vout_2

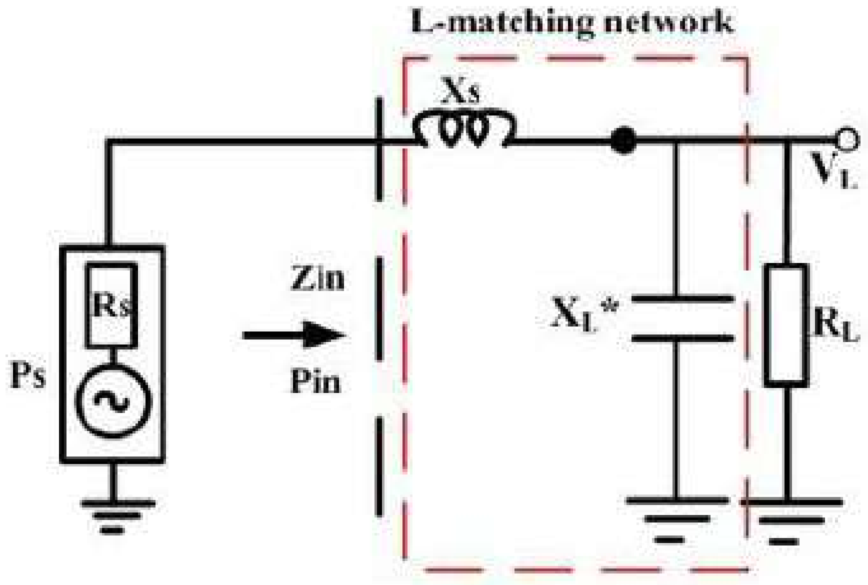
(c)



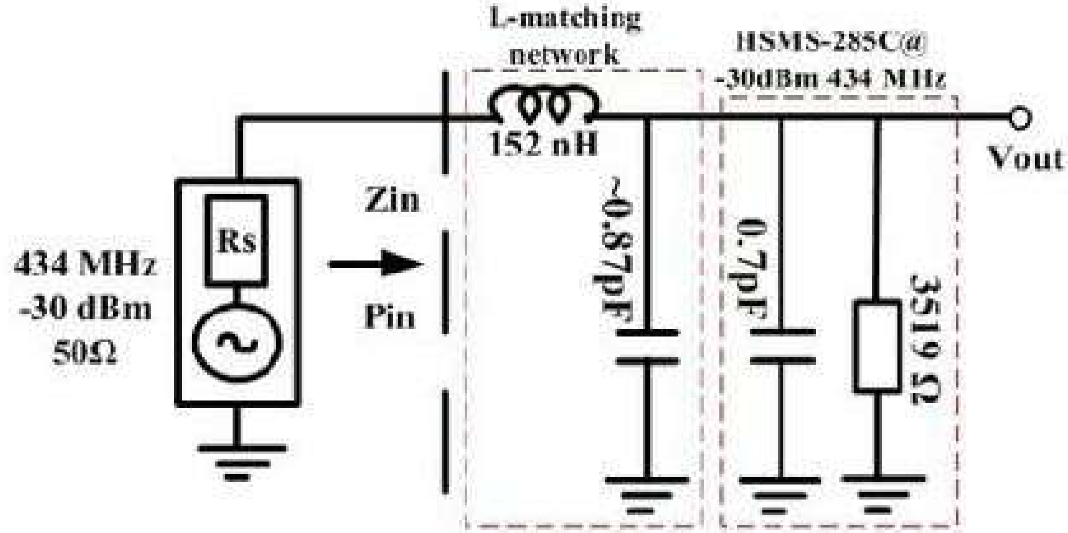
(d)



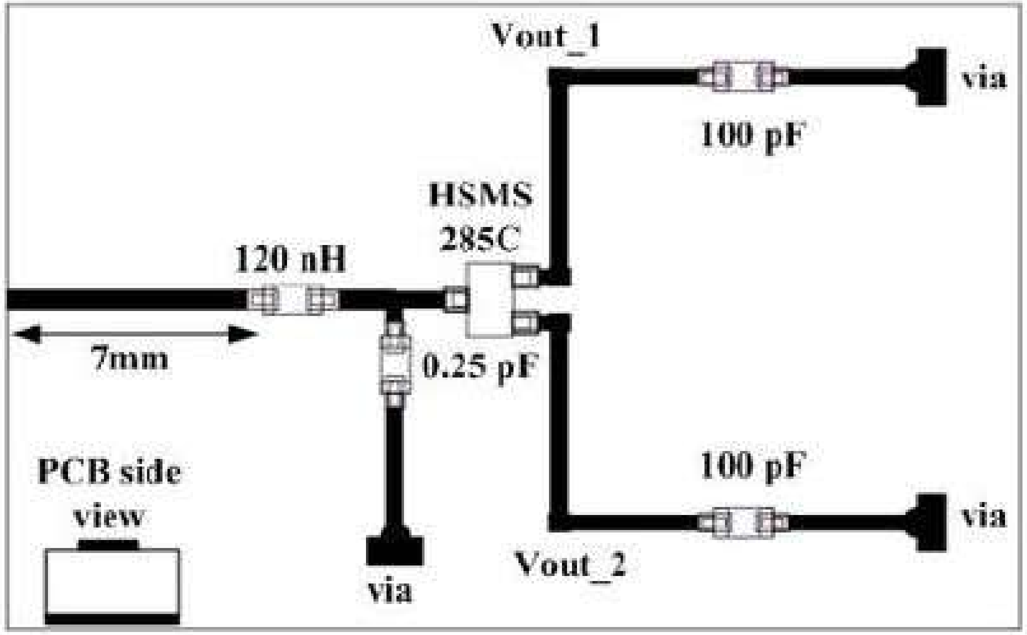
L-matching network
HSMS-286C and load @ 13.6MHz -30dBm
17.8μH
7.7pF
1.44pF
R_DP=46.3kΩ
V_L
Antenna; 13.6MHz @ P_S= -30dBm 50Ω
R_A
(a)
Resultant L-matching network
17.8μH
6.3pF
R_L
V_L
Ps
R_A
(b)
Vout_1
Vout_2
100pF
via
HSMS-286C
15μH
10cm
100pF
5.6pF
PCB side view
via
via
(c)
(d)


L-matching network
Xs
V_L
Rs
Ps
Zin
Pin
X_L*
R_L

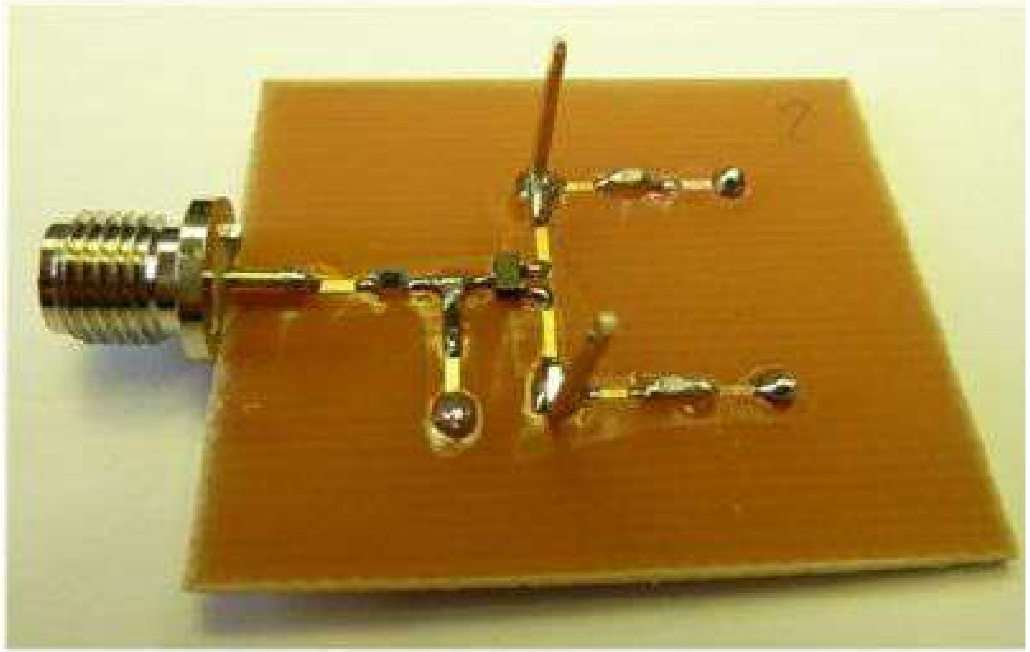
(a)


L-matching network
HSMS-285C@ -30dBm 434 MHz
152 nH
Vout
Zin
Pin
Rs
434 MHz
-30 dBm
50Ω
~0.87pF
0.7pF
3519 Ω

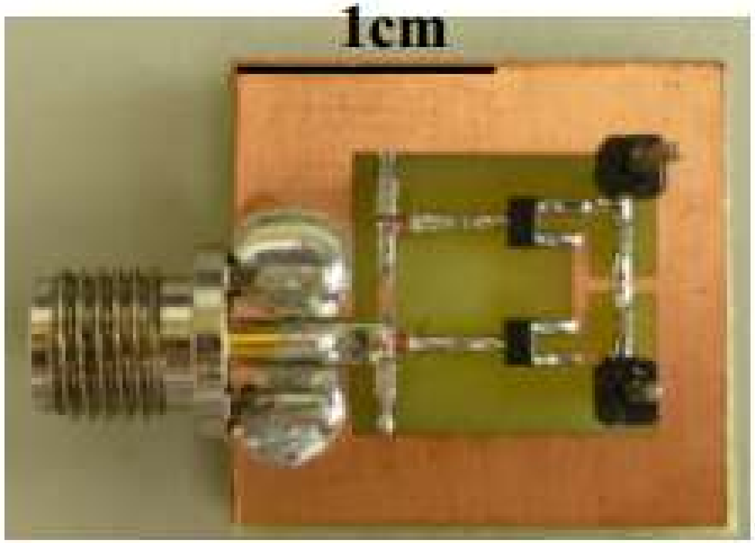
(b)

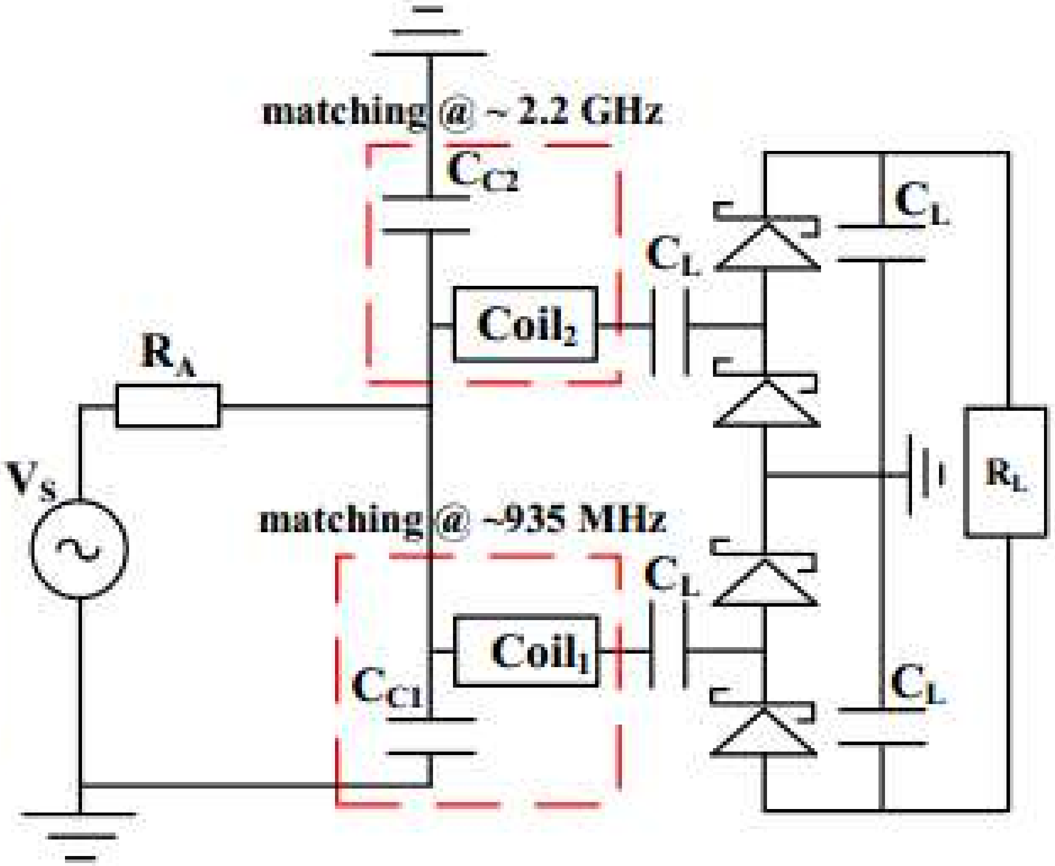

Vout_1
via
100 pF
HSMS
285C
120 nH
7mm
0.25 pF
100 pF
via
PCB side view
via
Vout_2

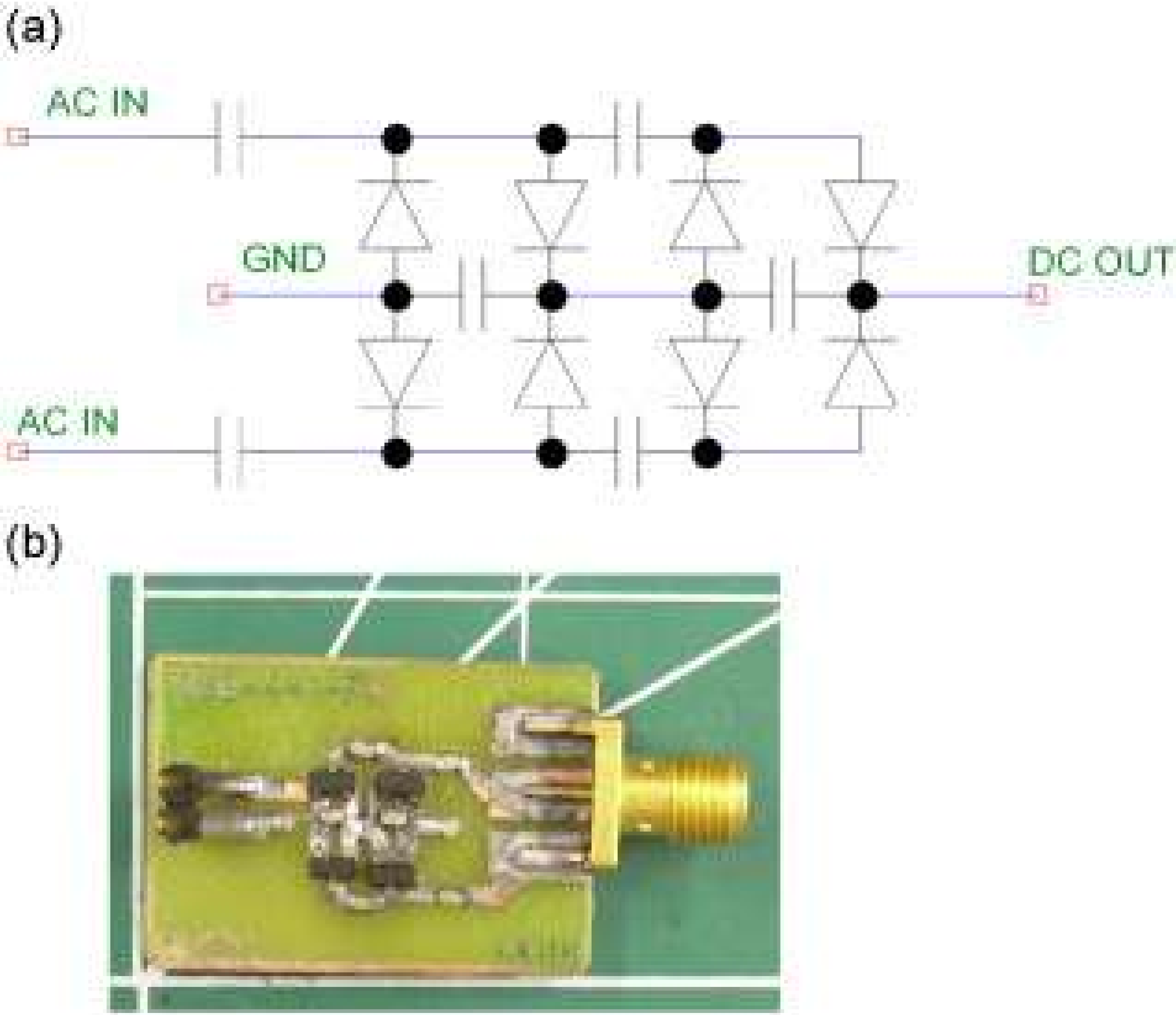
(c)

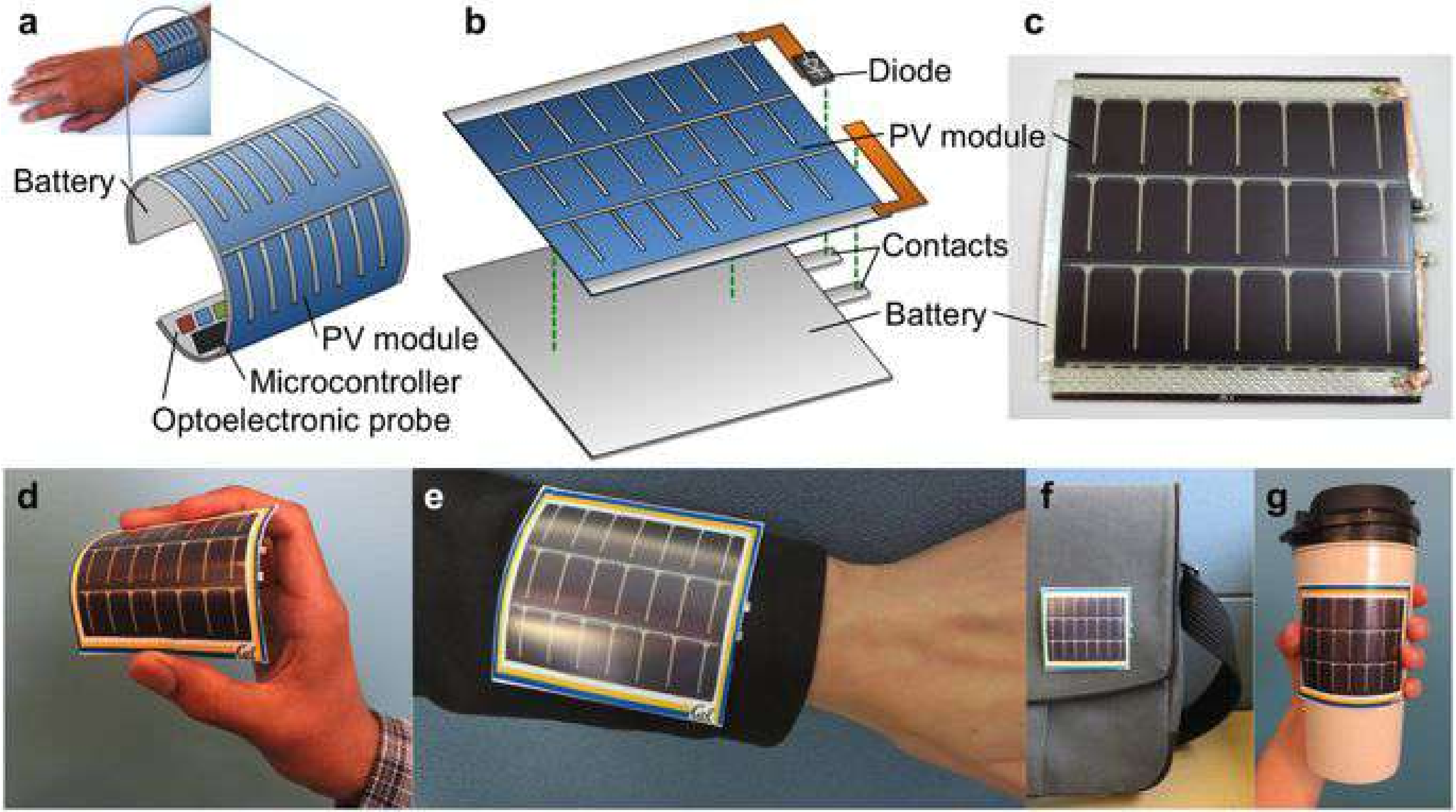


(d)


1cm

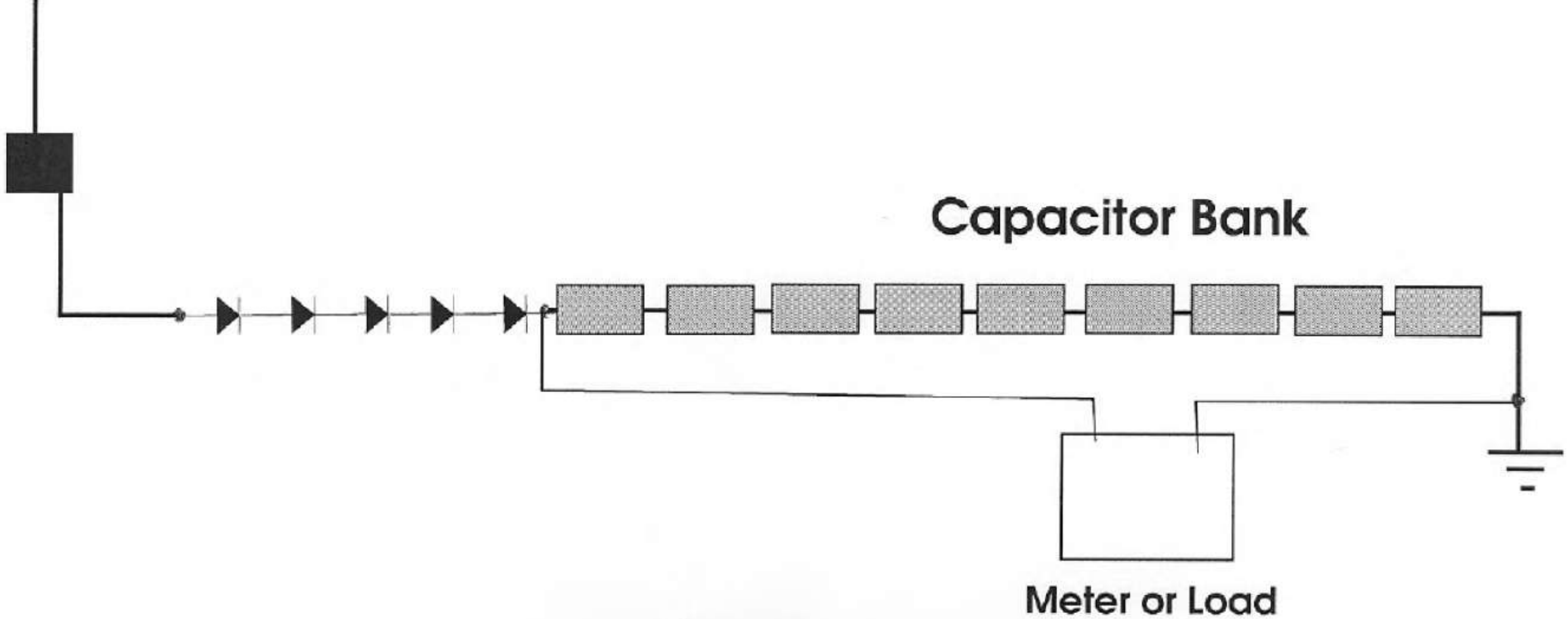

matching @ ~ 2.2 GHz
C$_{C2}$
C$_L$
Coil$_2$
R$_A$
V$_S$
R$_L$
matching @ ~935 MHz
Coil$_1$
C$_{C1}$

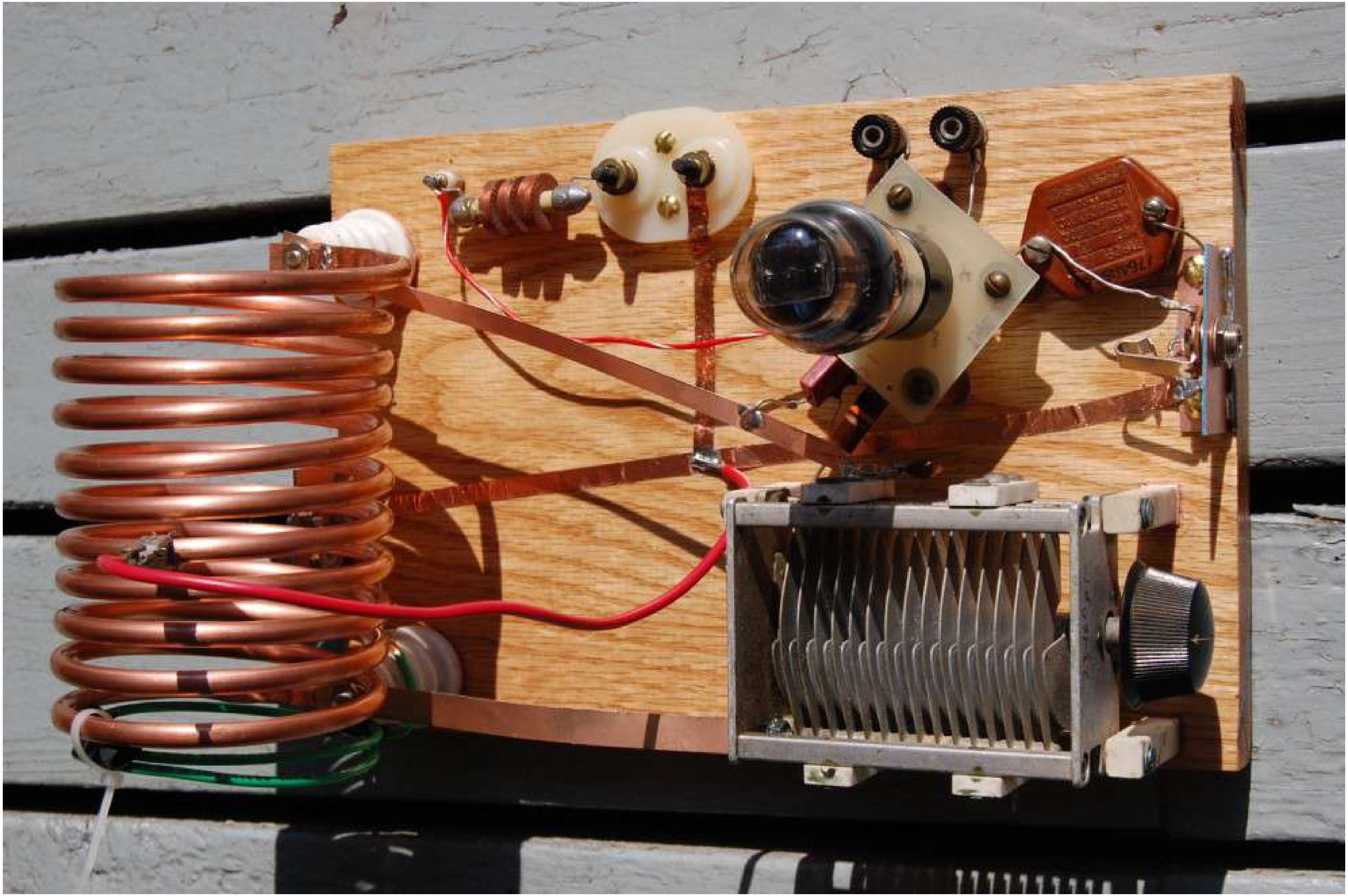

(a)
AC IN
GND
DC OUT
AC IN
(b)

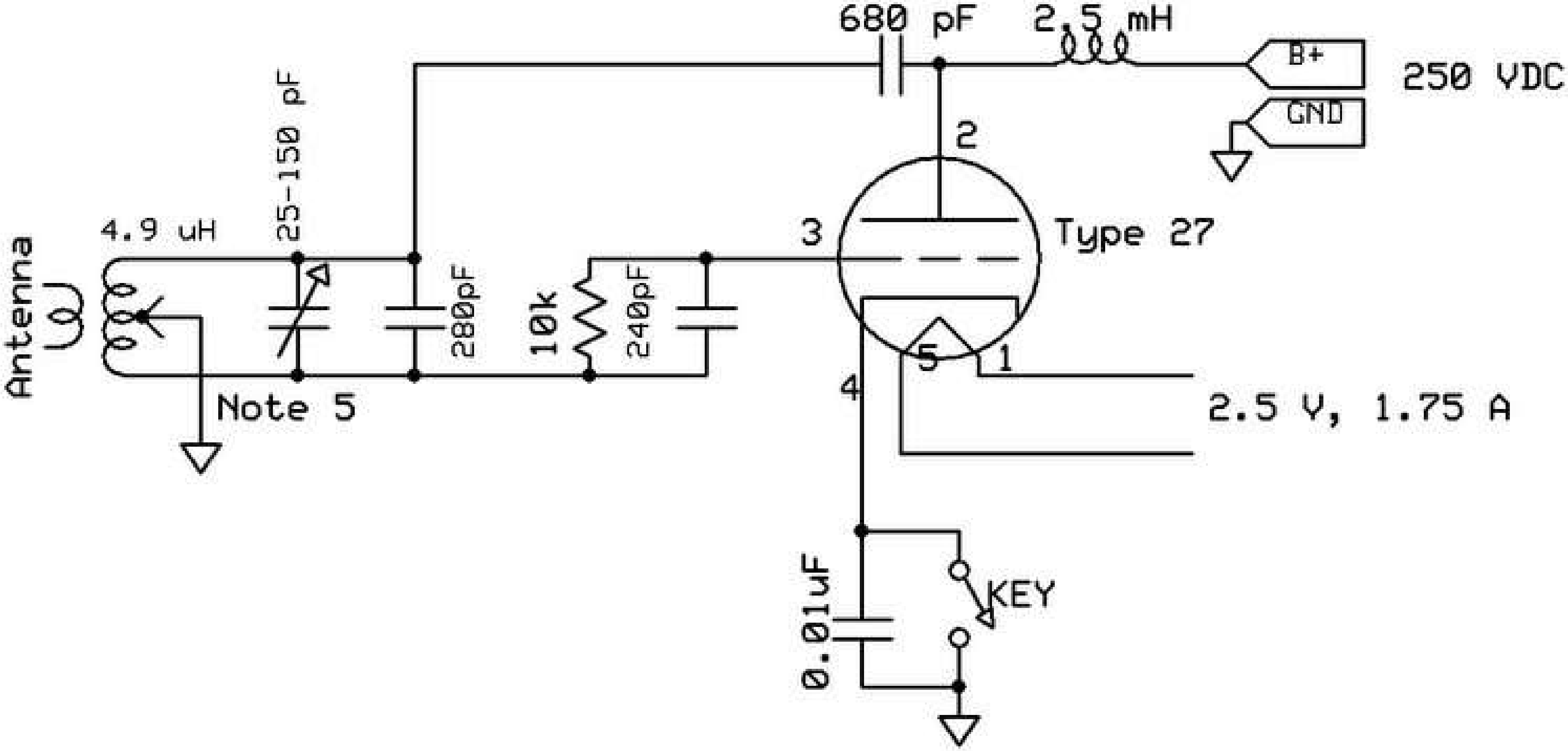

a
b
c
Battery
PV module
Microcontroller
Optoelectronic probe
Diode
PV module
Contacts
Battery
PV module
Battery
d
e
f
g

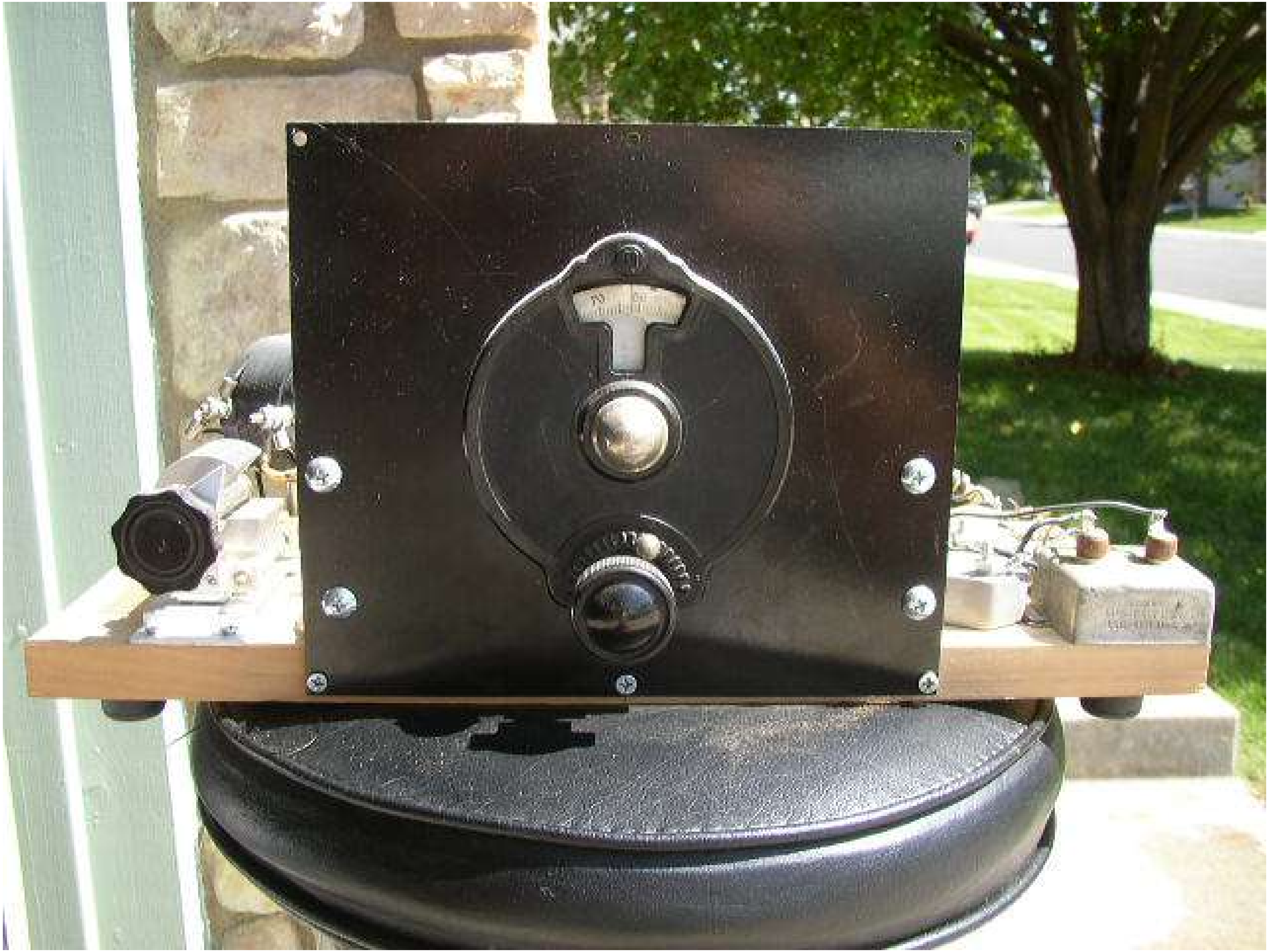
Capacitors we used are electrolytic rated at 400 volts x 47 uF put in series to equal 6,000 volts, the diodes we used were silicon 1000 volt 2 amp placed in series to equal 6,000 volts......... Ground was connected to laboratory wall out let ground.

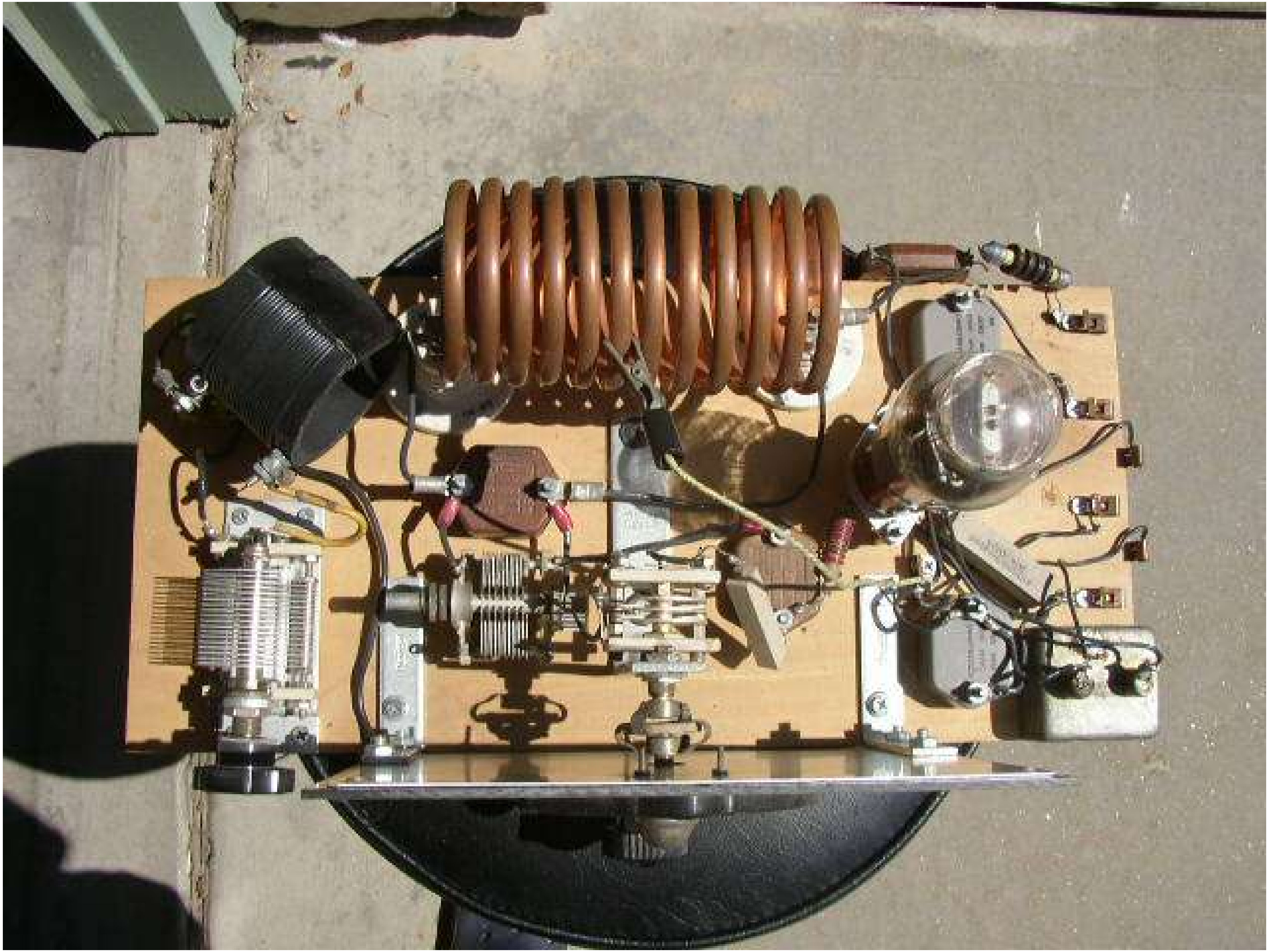
If you decide to try Tesla's experiment by pumping DC into the ground be careful, I tried this and it does work but is very dangerous to you or your neighbors. If someone is taking a shower or using water they can get killed or shocked. do this experiment far away from humans and animals. you can get far more energy out than you put in. I will not tell you much more because it is such a dangerous experiment.

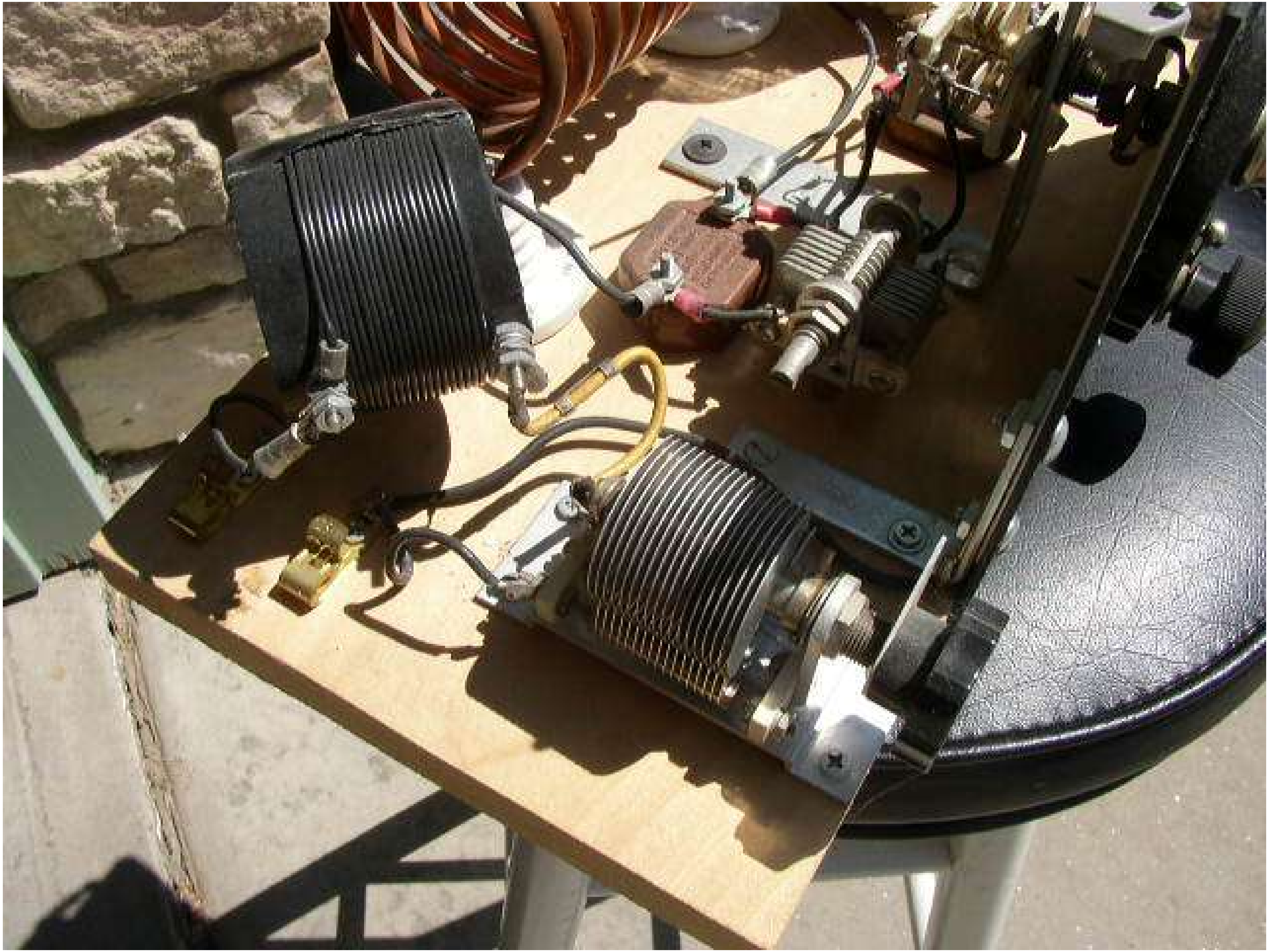





680 pF
2.5 mH
B+
250 VDC
GND
2
Type 27
3
4.9 uH
25-150 pF
Antenna
280pF
10k
240pF
5
1
4
Note 5
2.5 V, 1.75 A
0.01uF
KEY








0
10
20
30
40
50
60
70
80
90
100

Side View **Front View**

CONSTRUCTION 1

If you examine the following circuits you will find that each one is different. In most cases the difference lies in the coil design and/or the method by which the crystal and aerial is tapped into it. Each of these circuits has its own particular advantage to suit different conditions and the ideal circuit in some localities is not necessarily the best in others. It is not just a matter of a given circuit giving louder results than another, if it were there would be no point in showing more than one.

The main problem is to obtain adequate selectivity without reducing the volume level.

A receiver is said to be selective when it tunes sharply, a set with poor selectivity allows the stations to spread over the dial and when used near a transmitter will receive the local stations mixed together, which of course is useless.

Consider Fig. 16a, this is a very simple receiver, with no special attempt to provide any great amount of selectivity. In areas where signal

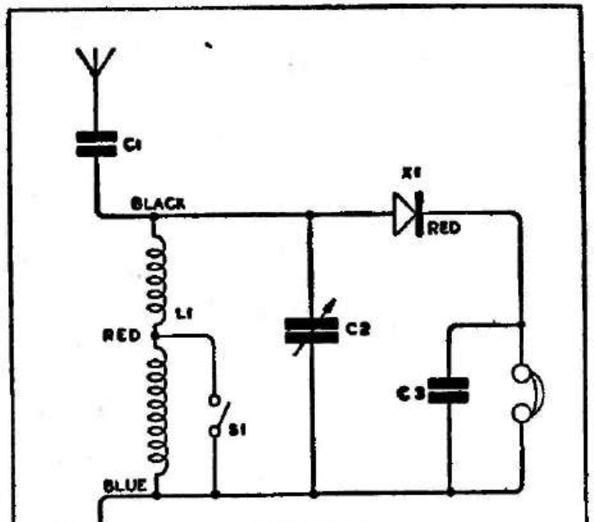
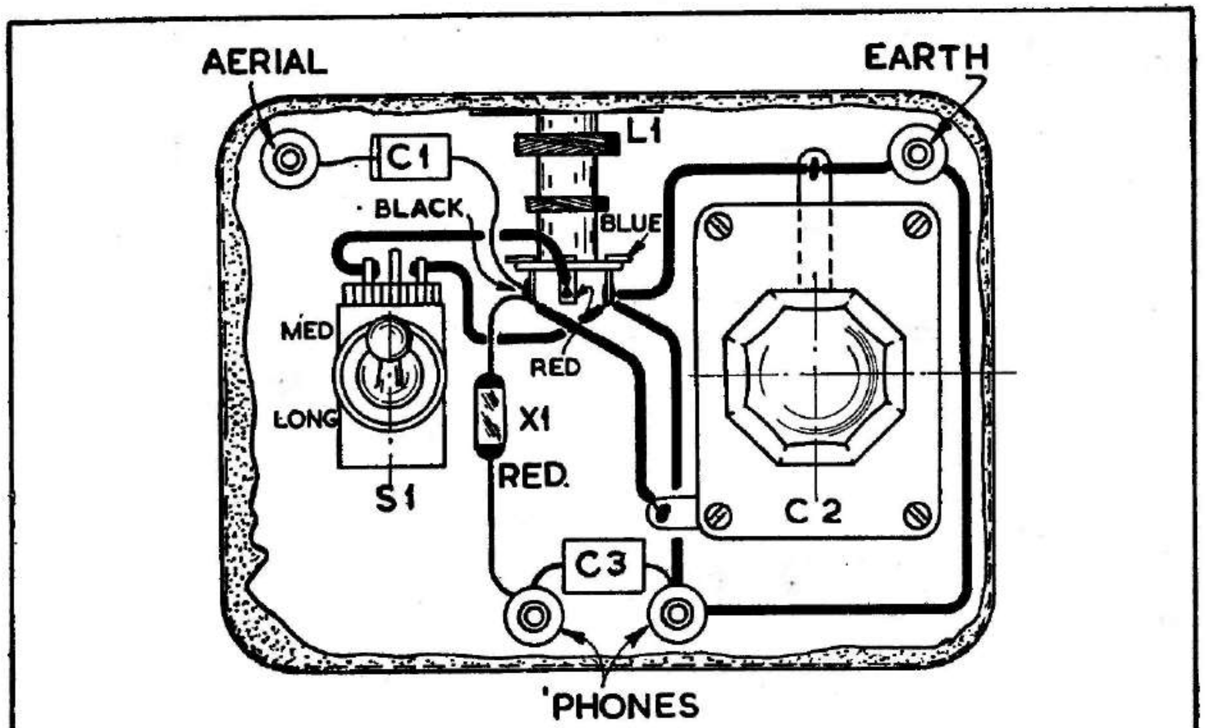


FIG. 16a



LID SHOWN BROKEN AWAY TO

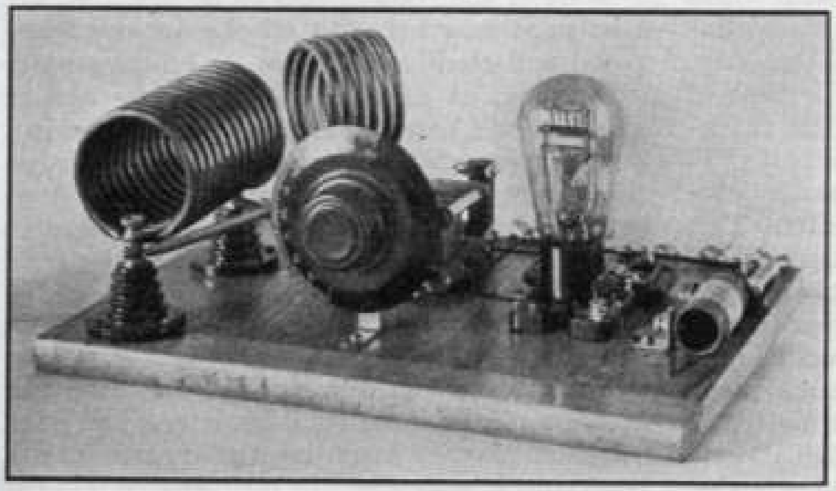


FIG. 703 — THE LOW-POWER SINGLE-TUBE TRANSMITTER

The plate tank circuit is at the left. The grid coil, leak and grid condenser are to the right of the Type 10 tube. The antenna coil is shown swung away from the plate coil to give loose antenna coupling.

Late last fall I saw an announcement regarding the upcoming '19
(AWA). Transmitters used during the event must only utilize 192
transmitters have to utilize self-excited oscillators! Listening-in o
imagine how different the bands must have sounded back in the l
heard sounded wonderful, considering the simplicity of the trans
came after watching and listening to WØVLZ's (Neil) superb You
watch these without wanting to roll-up their sleeves and start bui

After some research into the 1929 transmitter style, it became ap
Tuned (TNT) design. I can well imagine the countless late night l
simpler off-shoot of the TPTG design.

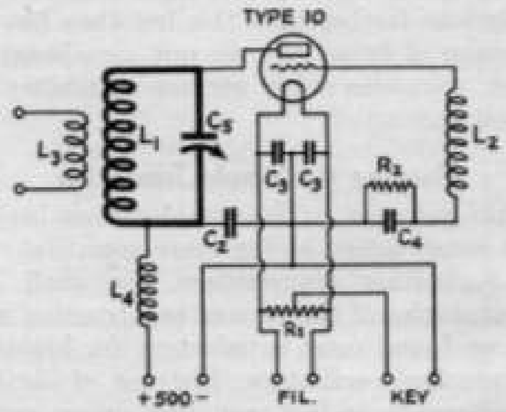


FIG. 704 — THE CIRCUIT OF THE TRANSMITTER

L_1, L_2 and L_3 — Plate, grid and antenna coils. The specifications are given under the illustration of the coils.

L_4 — A commercial "short-wave" receiving-type radio-frequency choke will do or one can be made by winding a two-inch length of half-inch tubing or wooden dowel with No. 38 d.s.c. or d.c.c. wire.

C_2 — 2000-μμfd. (.002 μfd.) mica fixed condenser, receiver type, if plate voltage does not exceed 500.

C_3 — 5000-μμfd. (.005 μfd.) mica fixed condenser, receiver type.

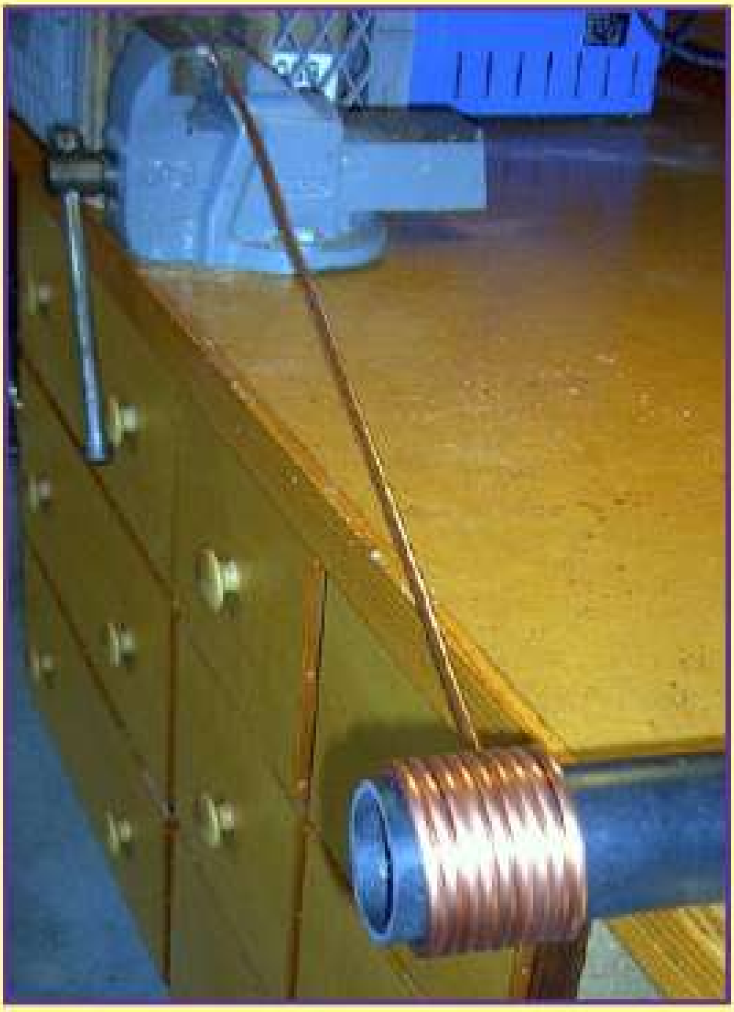
C_4 — 250-μμfd. (.00025 μfd.) mica fixed condenser, receiver type.

C_5 — 500-μμfd. (.0005 μfd.) variable condenser. Any good receiving condenser will be satisfactory.

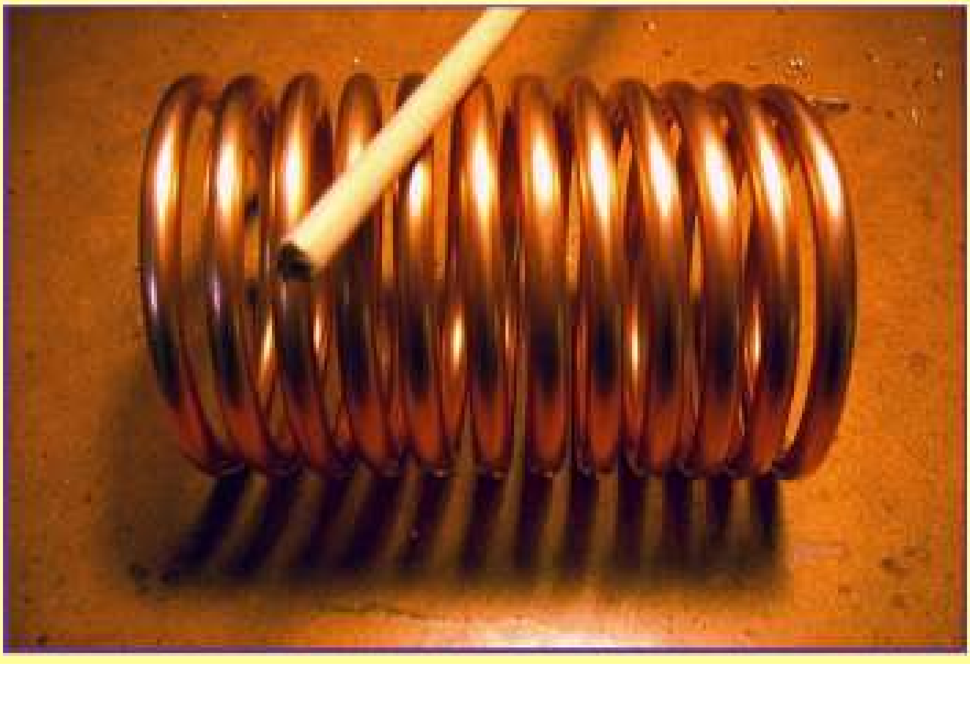
R_1 — Center-tapped resistor, 75 to 100 ohms total resistance.

R_2 — Grid-leak resistor, 10,000 ohms. Any small resistor rated at 5 watts or more will do.

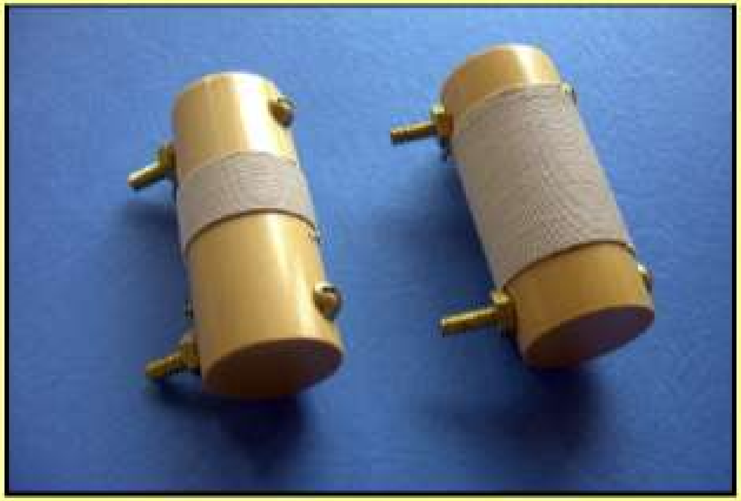
Three General Radio or similar stand-off insulators will be necessary, as well as 8 Fahnestock clips, some miscellaneous small machine screws and nuts, and a few feet of bus wire.



r coils. Once the proper number of turns is reached it is just a matter of flattening and drilling the ot
, I wound a plate coil for 40m as well. I haven't been brave enough to try the TNT on 20m yet but I w



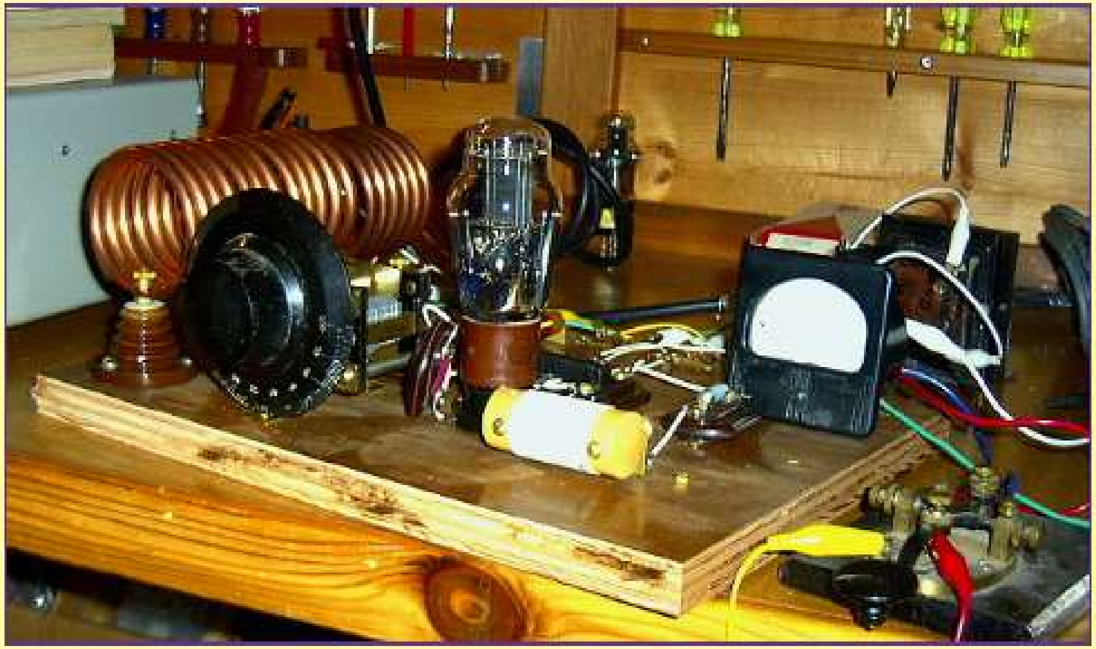
ither wound on bakelite tubing or on well-sealed wood dowel. Not having any bakelite made the choice any easy one. The 1" forms were made from some Yellow C



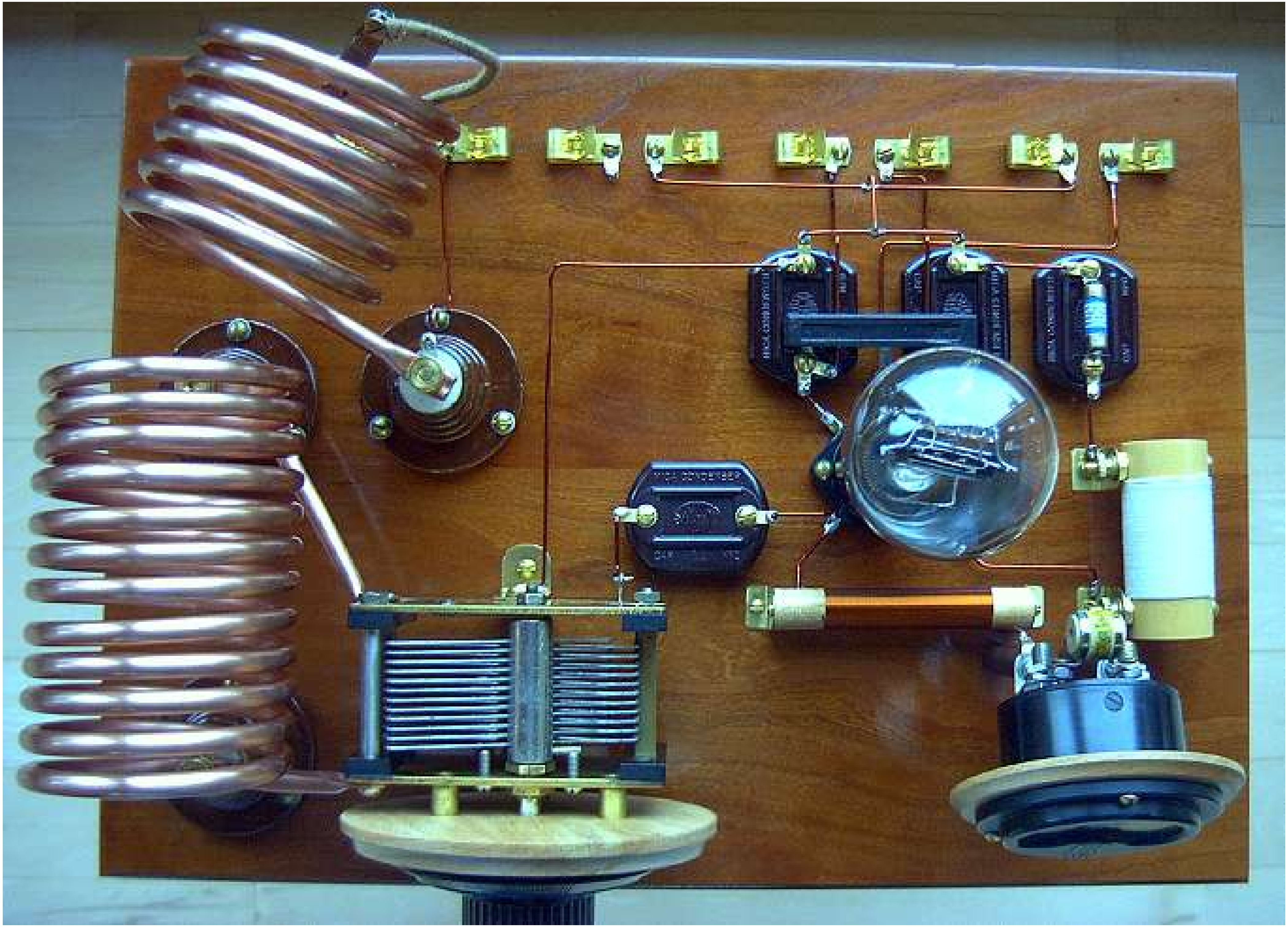
resistor was fabricated to resemble the original bakelite-enclosed 'Pilot' style, popular in the late 20's.The pictures indicate how this was done and the finished result. The small plexi-glass form was filled with black Fin
emoved and the entire package was baked in the kitchen toaster oven at its lowest temperature for several hours. This achieved the desired hardening effect and a suitable reproduction Pilot filament resistor.

reproduction also, of an early 'Lavite' model. The ends of a new wire-wound resistor were removed and found to be made from brass. These ends were then fitted to the body of an older style 10K resistor, soldered, pai
y across the terminals of the grid cap. I found out later that the actual value of the grid leak is quite critical in the TNT. I tried various values and luckily the one I had manufactured turned out to be perfect. My earlier
UX-210) required a far larger grid leak to produce best keying and good output. If you are making your own grid leak I would recommend that the value be optimized first, before the grid leak is built in its final form.

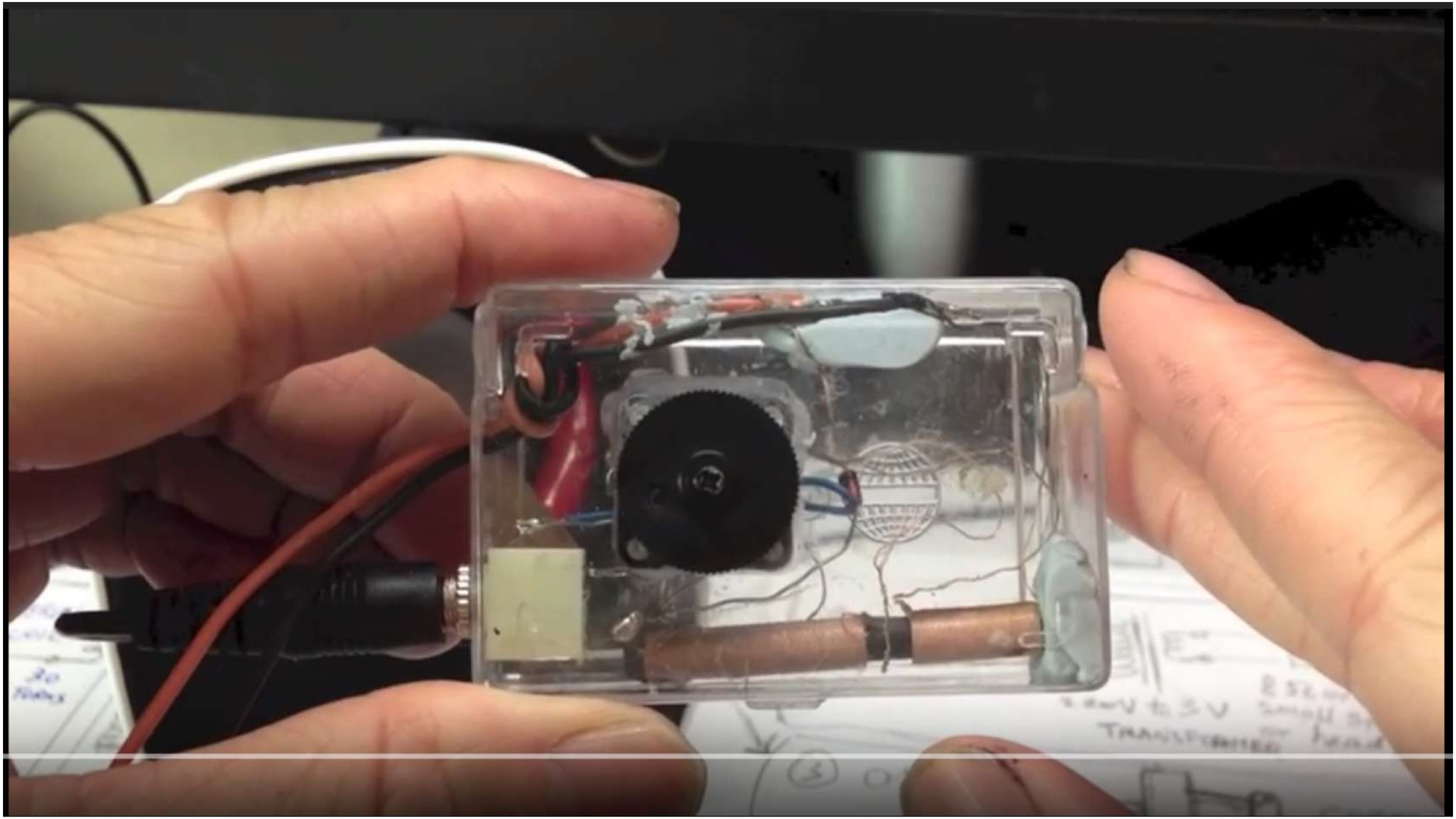
as breadboarded - first using the Type '45 and later with the Type '10. Various values were tried for both the grid leak and for the grid capacitor. Both affect keying and outp
ling of the plate voltage in order to remove high voltage from the large exposed tank coil. I did not want to run the chance of accidently grabbing hold of it late some evening
fference between shunt-feed and the standard series-feed method. It saddens me to think of all of the amateurs of the 20's or 30's that may have been unnecessarily hurt or ki

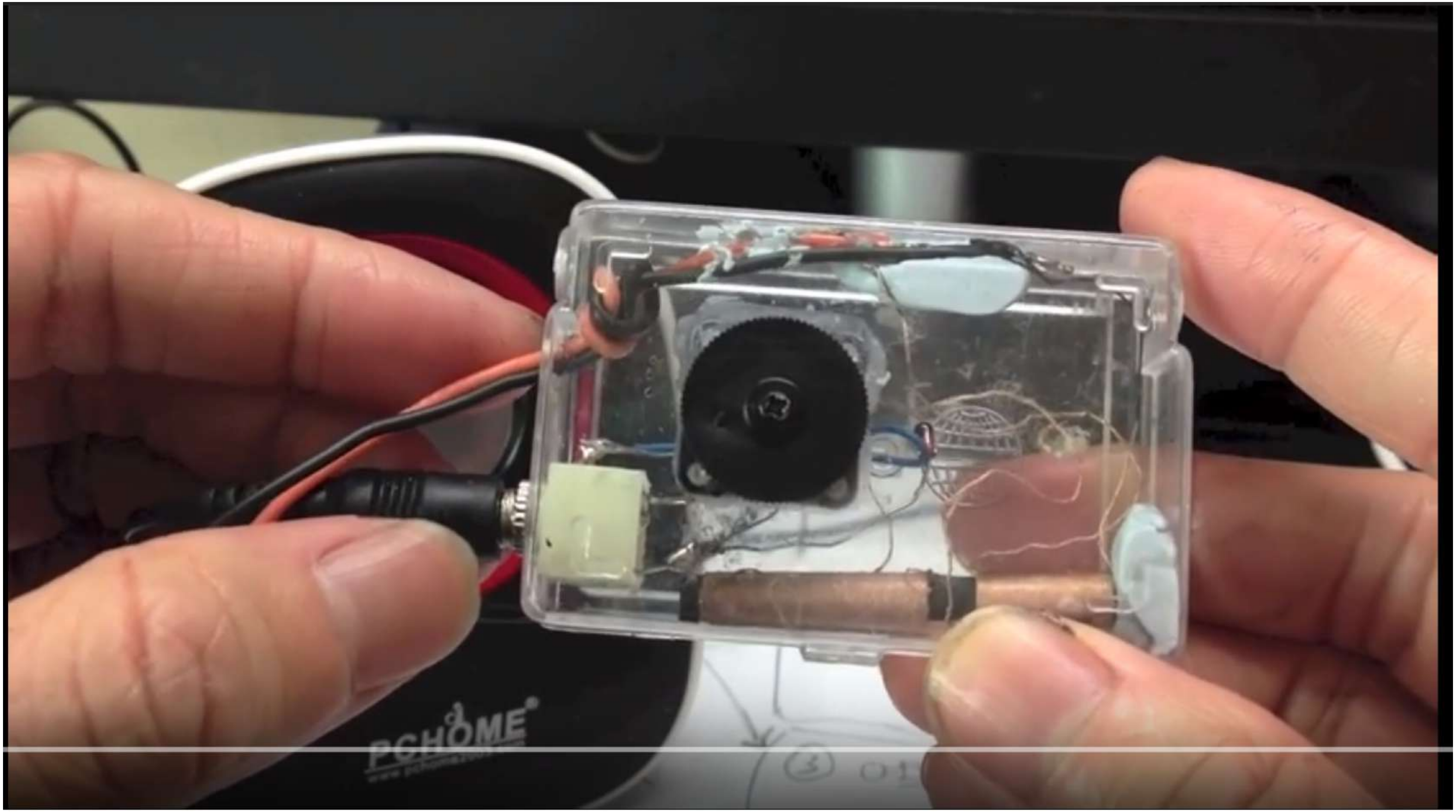



CANADIAN STATION
VE
7SL
MAYNE ISLAND, BRITISH COLUMBIA, CANADA




Billy's DIY Dreamshop
Battery Free Crystal Radio
http://billydiy.blogspot.hk

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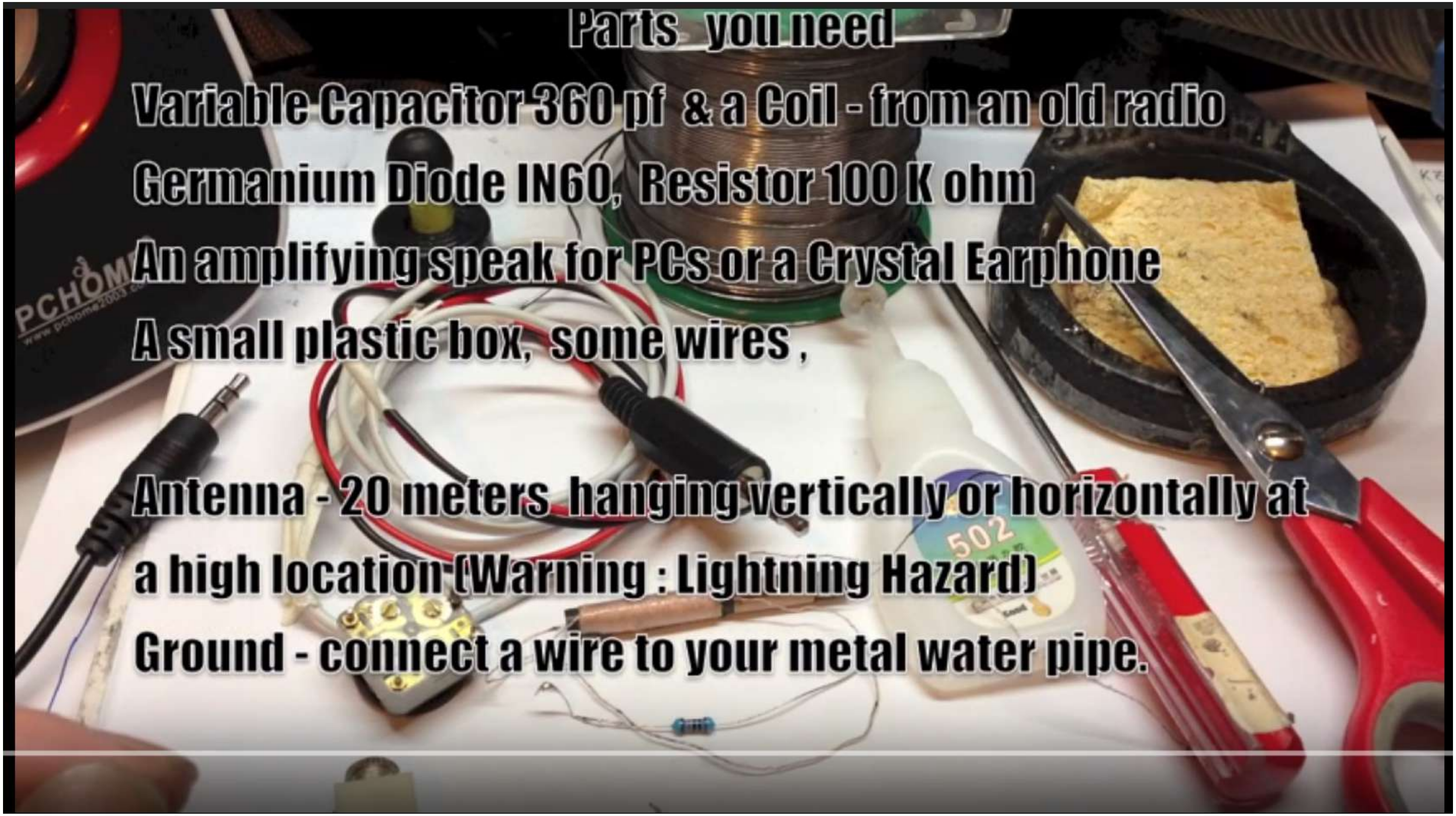
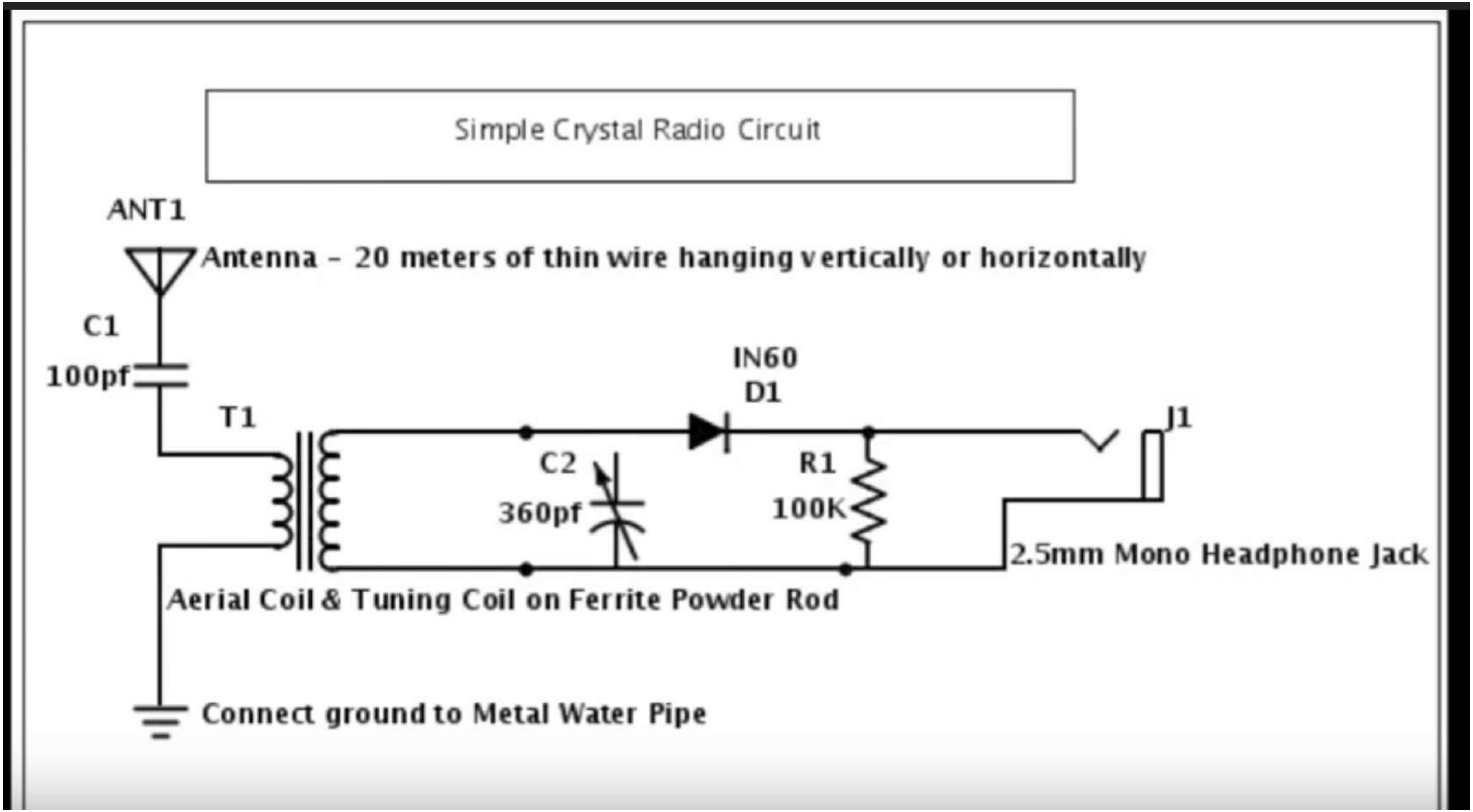
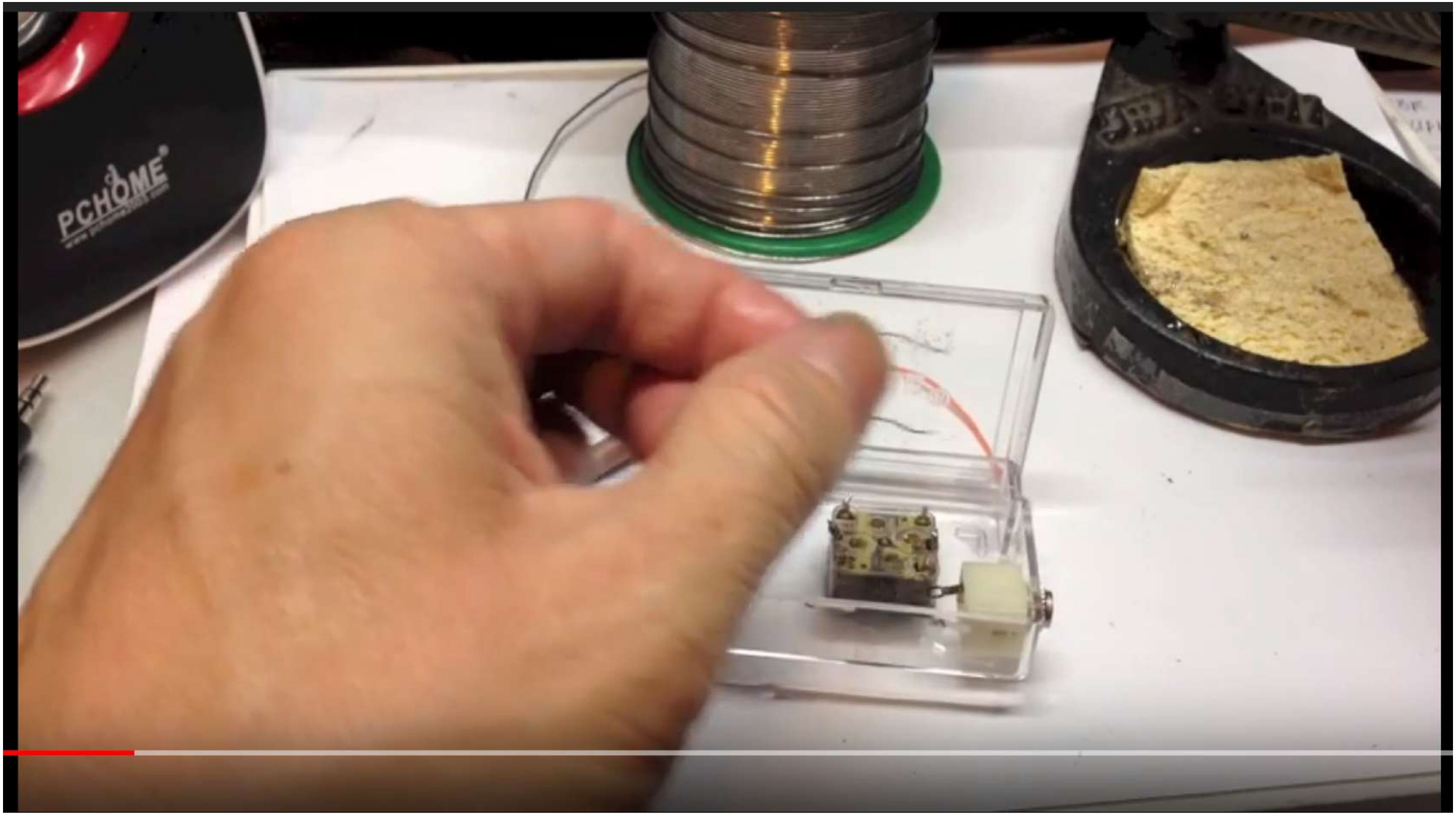

Parts you need
Variable Capacitor 360 pf & a Coil - from an old radio
Germanium Diode IN60, Resistor 100 K ohm
An amplifying speak for PCs or a Crystal Earphone
A small plastic box, some wires ,
Antenna - 20 meters hanging vertically or horizontally at
a high location (Warning : Lightning Hazard)
Ground - connect a wire to your metal water pipe.


Simple Crystal Radio Circuit
ANT1
Antenna - 20 meters of thin wire hanging vertically or horizontally
C1
100pf
IN60
D1
T1
J1
C2
360pf
R1
100K
2.5mm Mono Headphone Jack
Aerial Coil & Tuning Coil on Ferrite Powder Rod
Connect ground to Metal Water Pipe


502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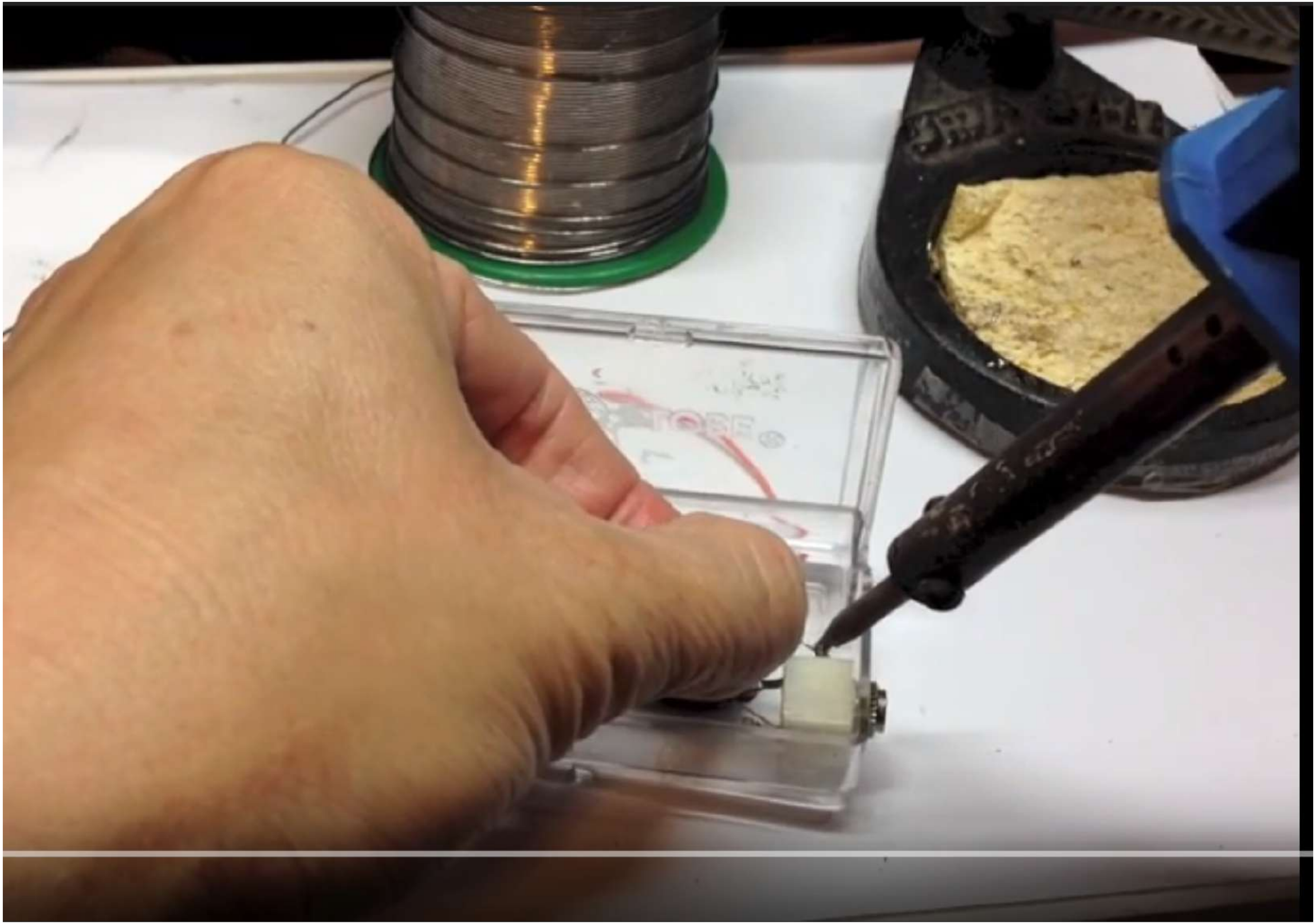

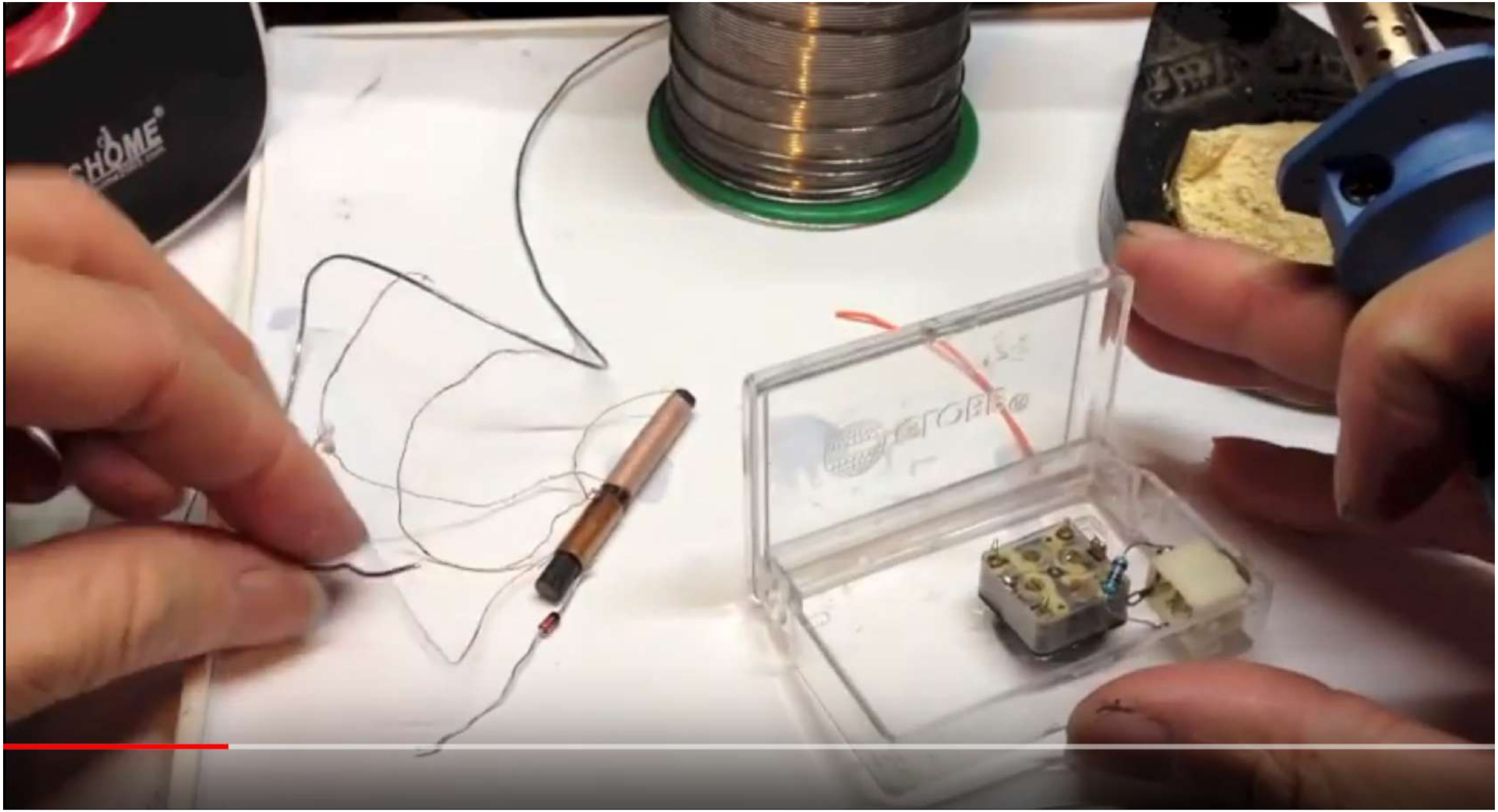

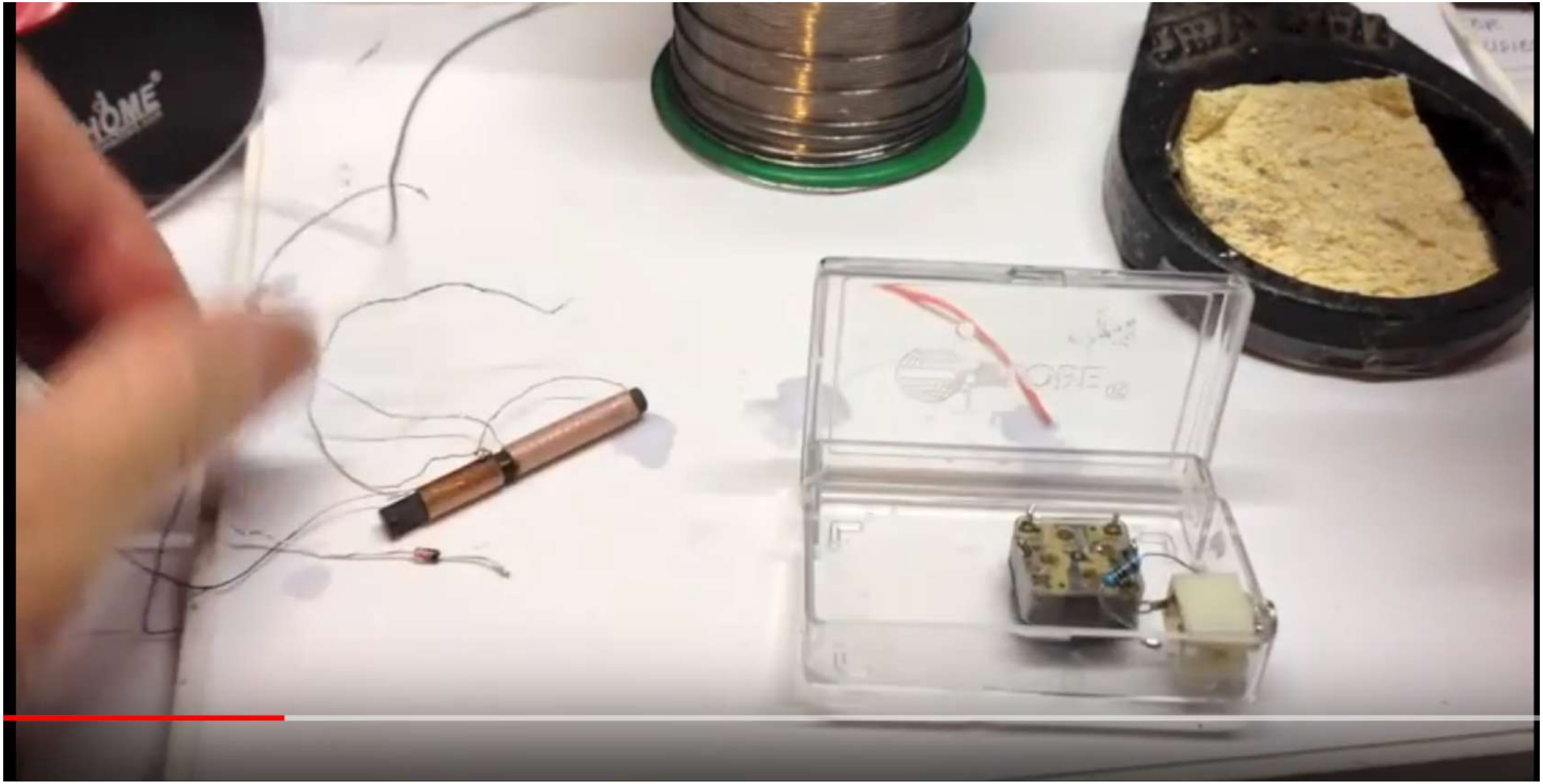
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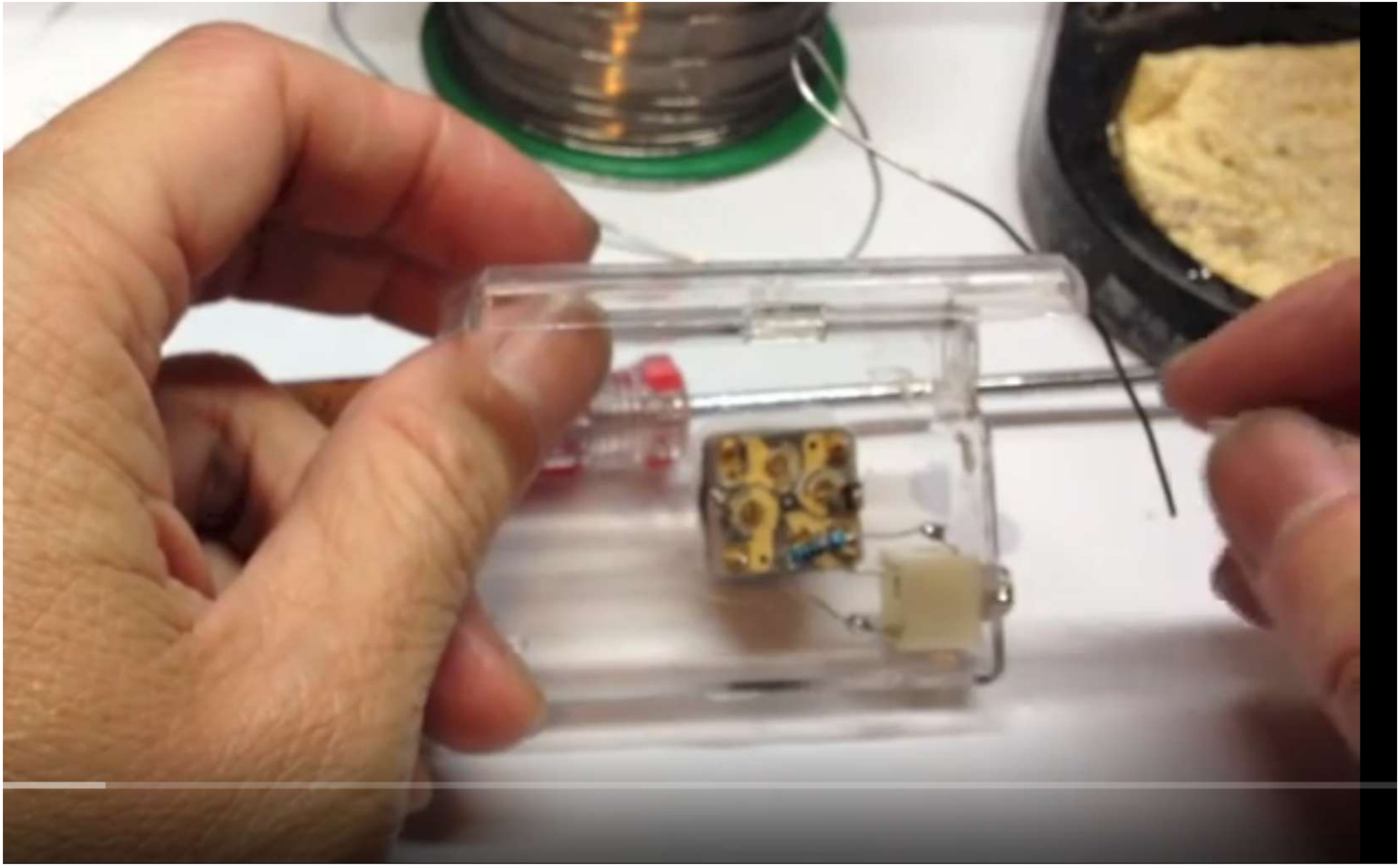

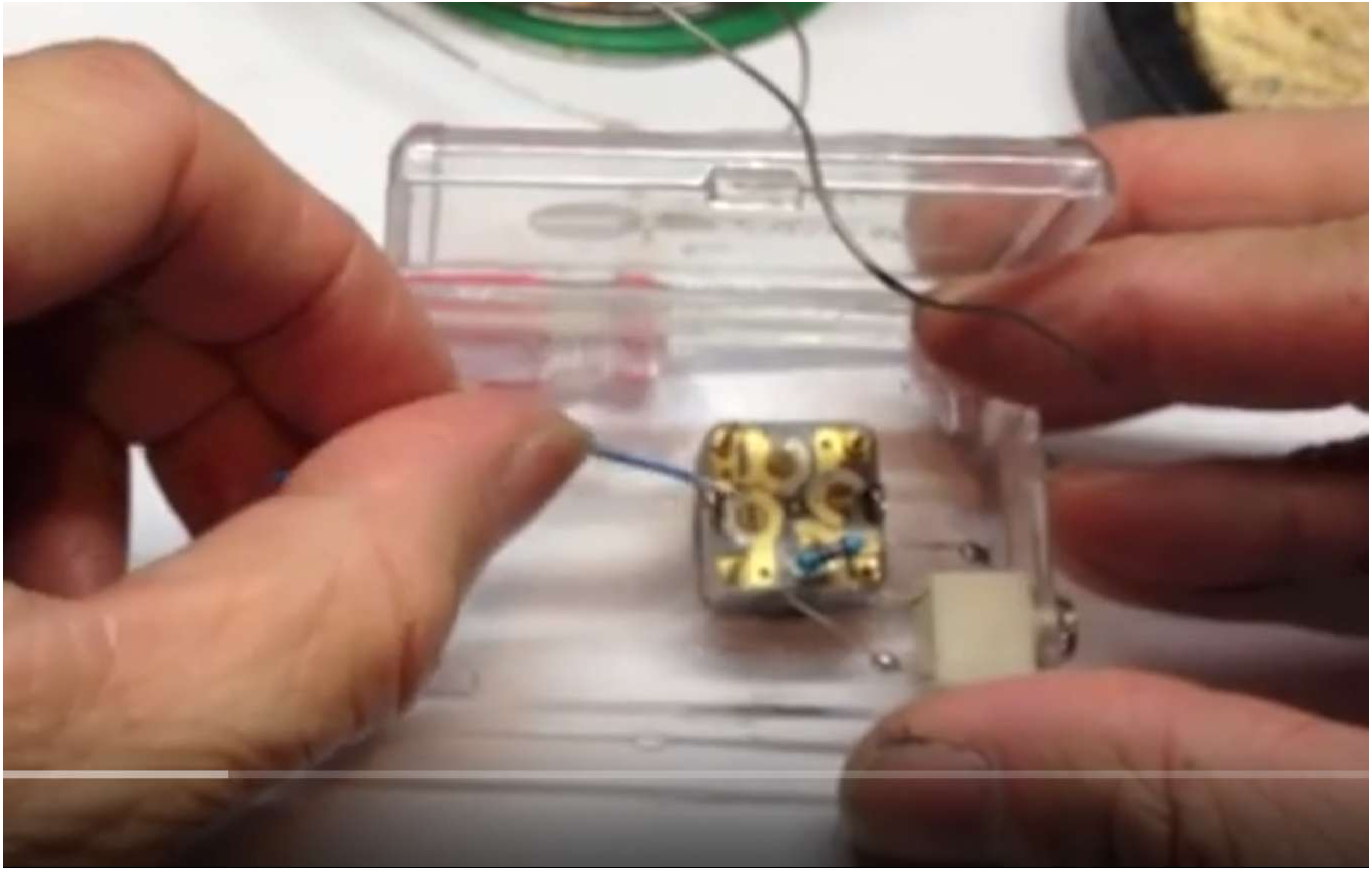

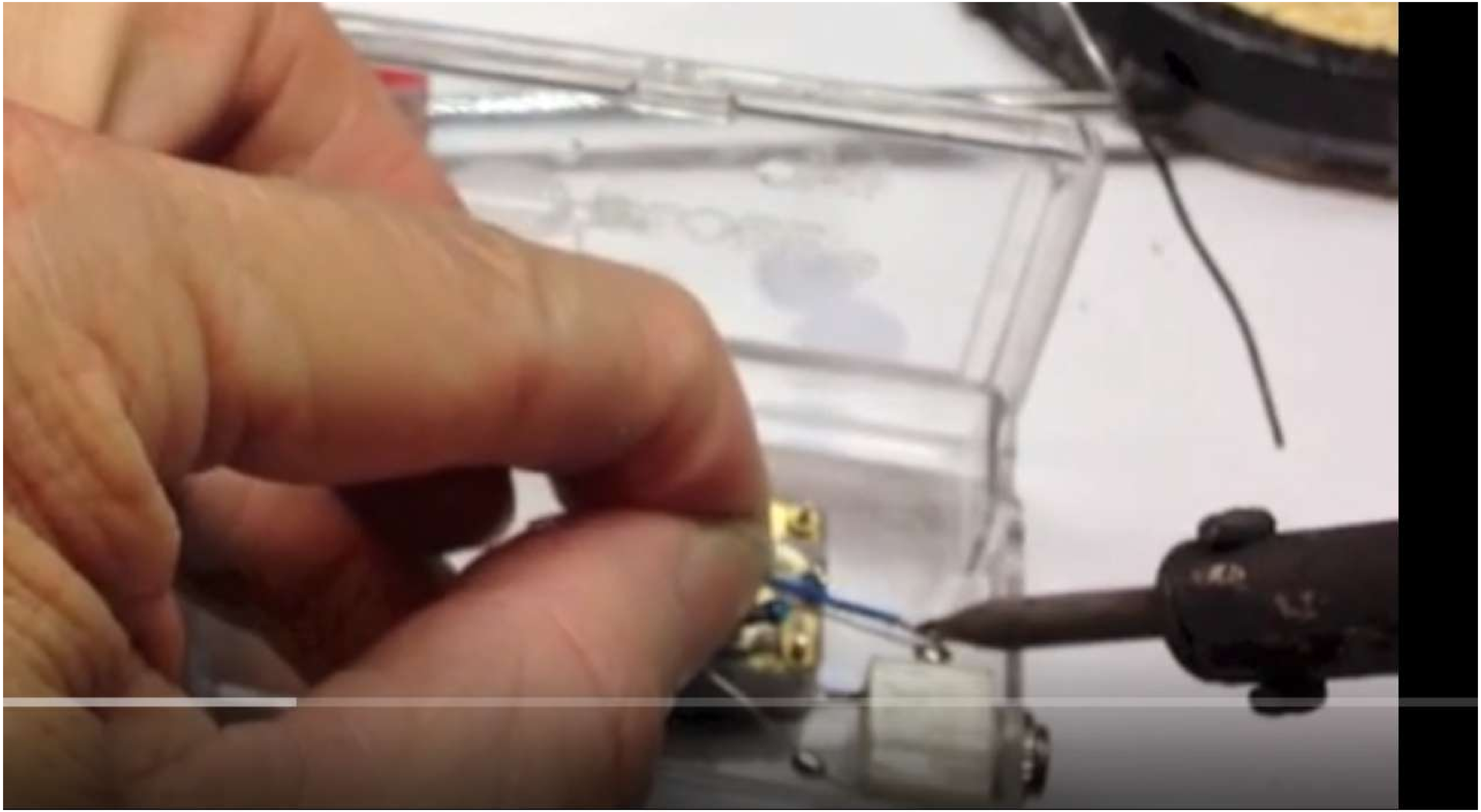


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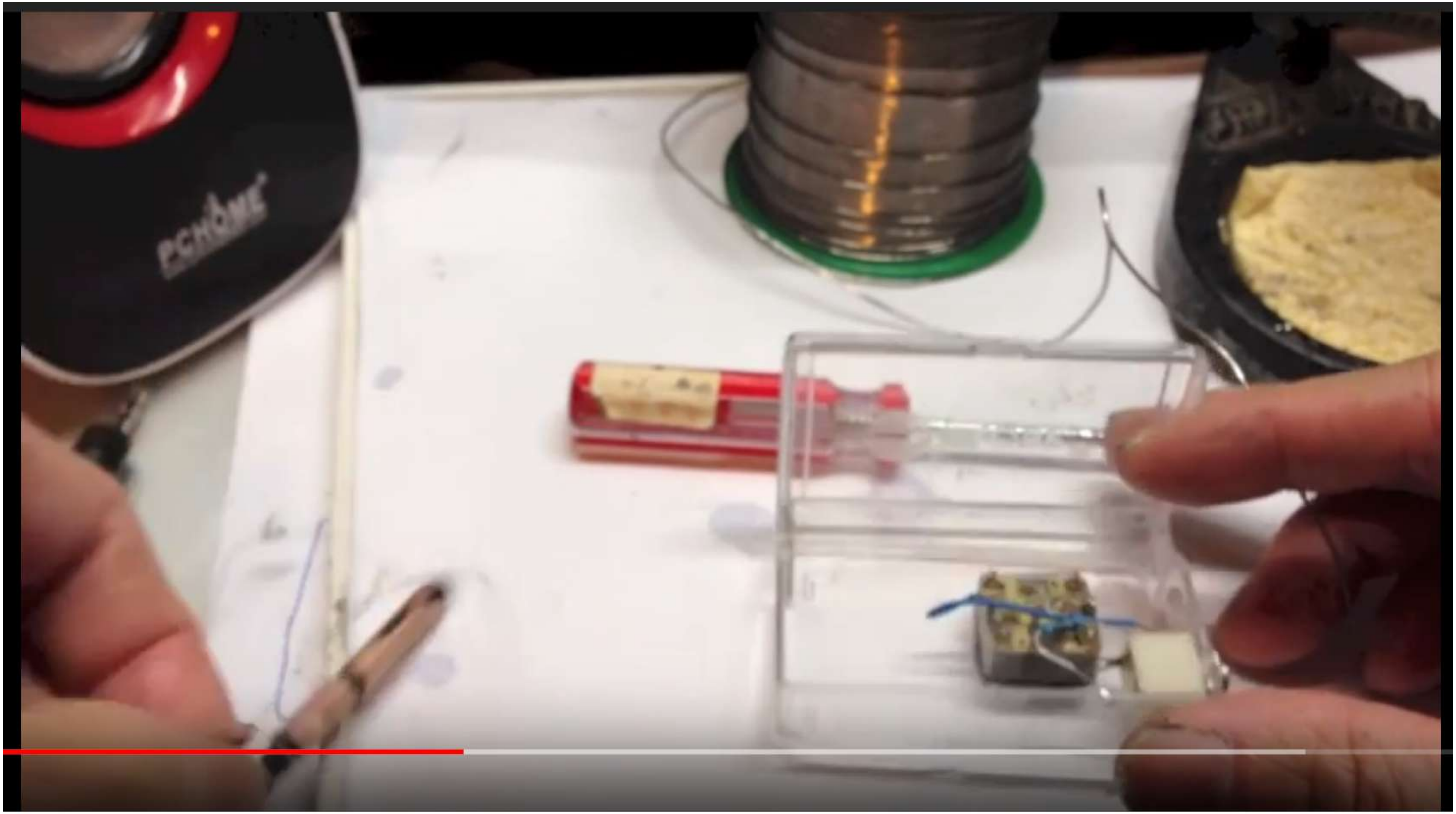
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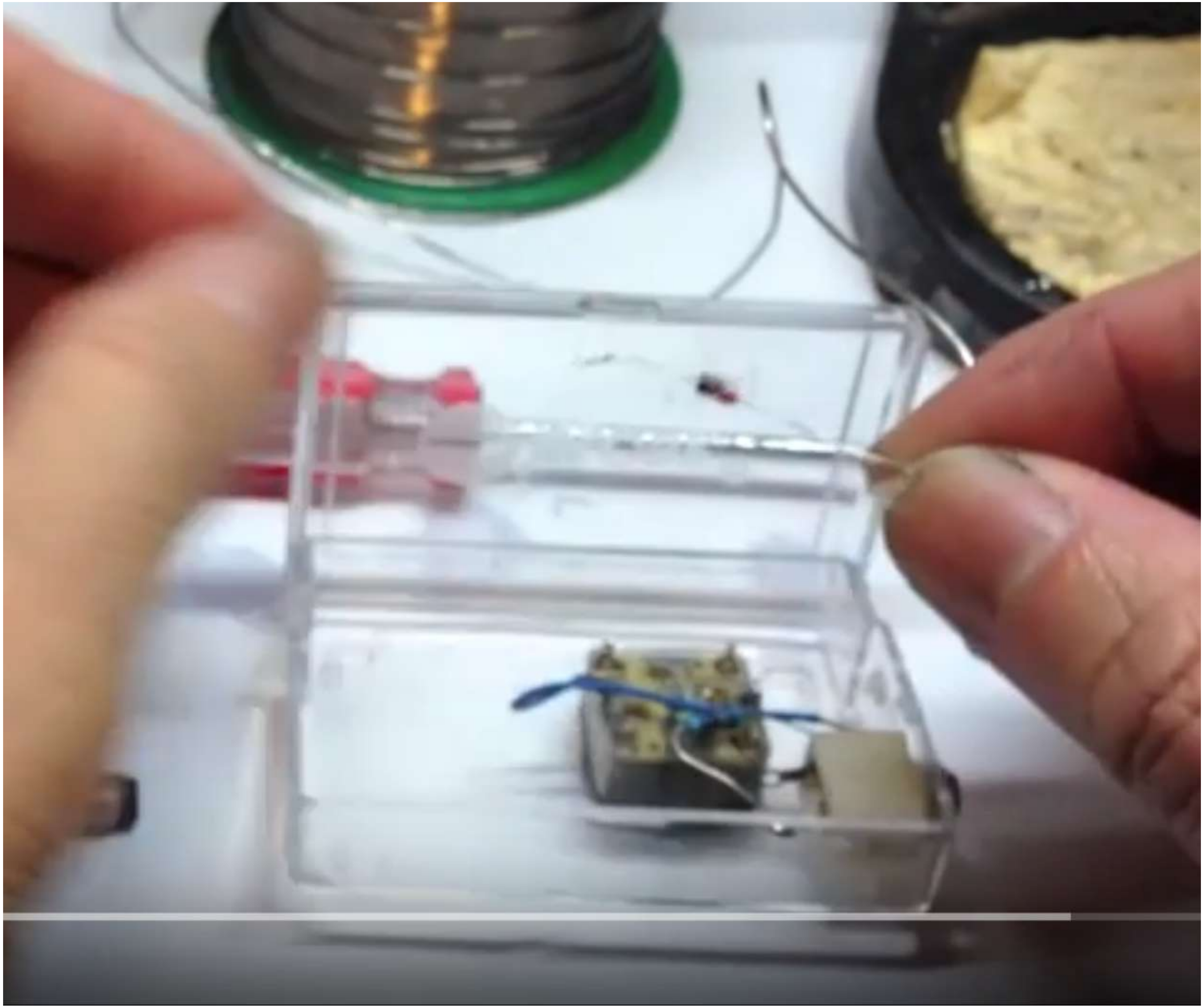

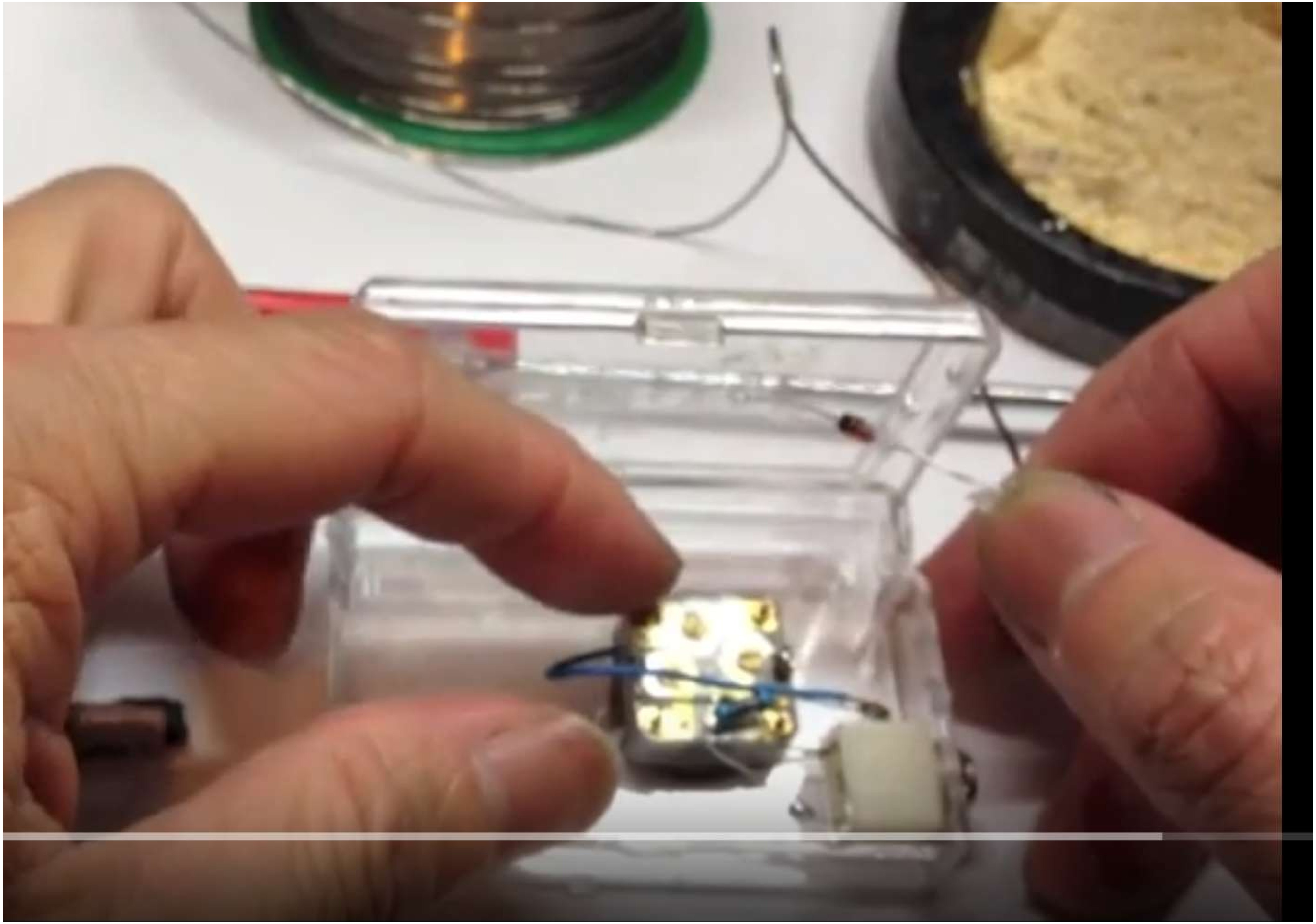

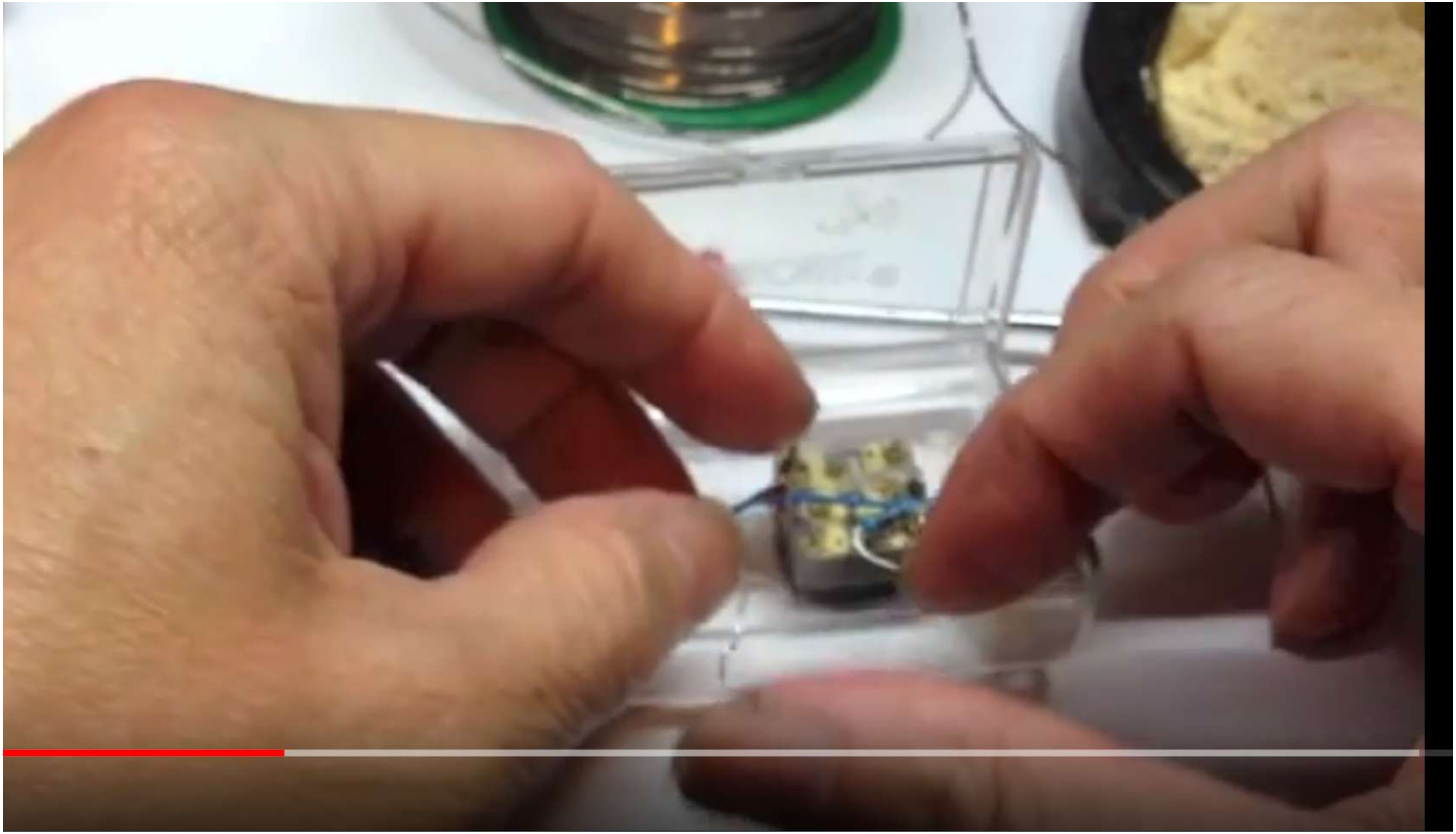

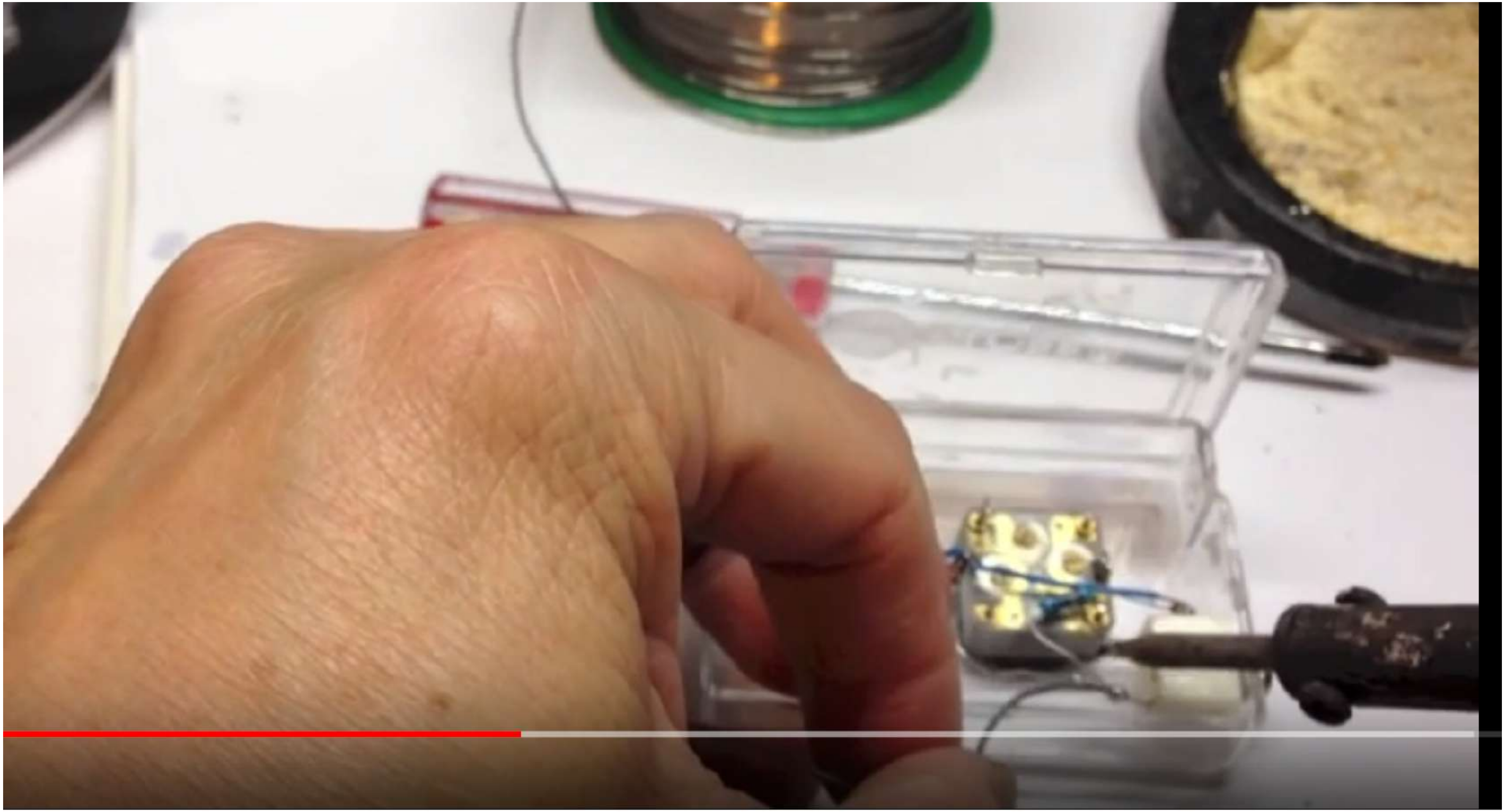

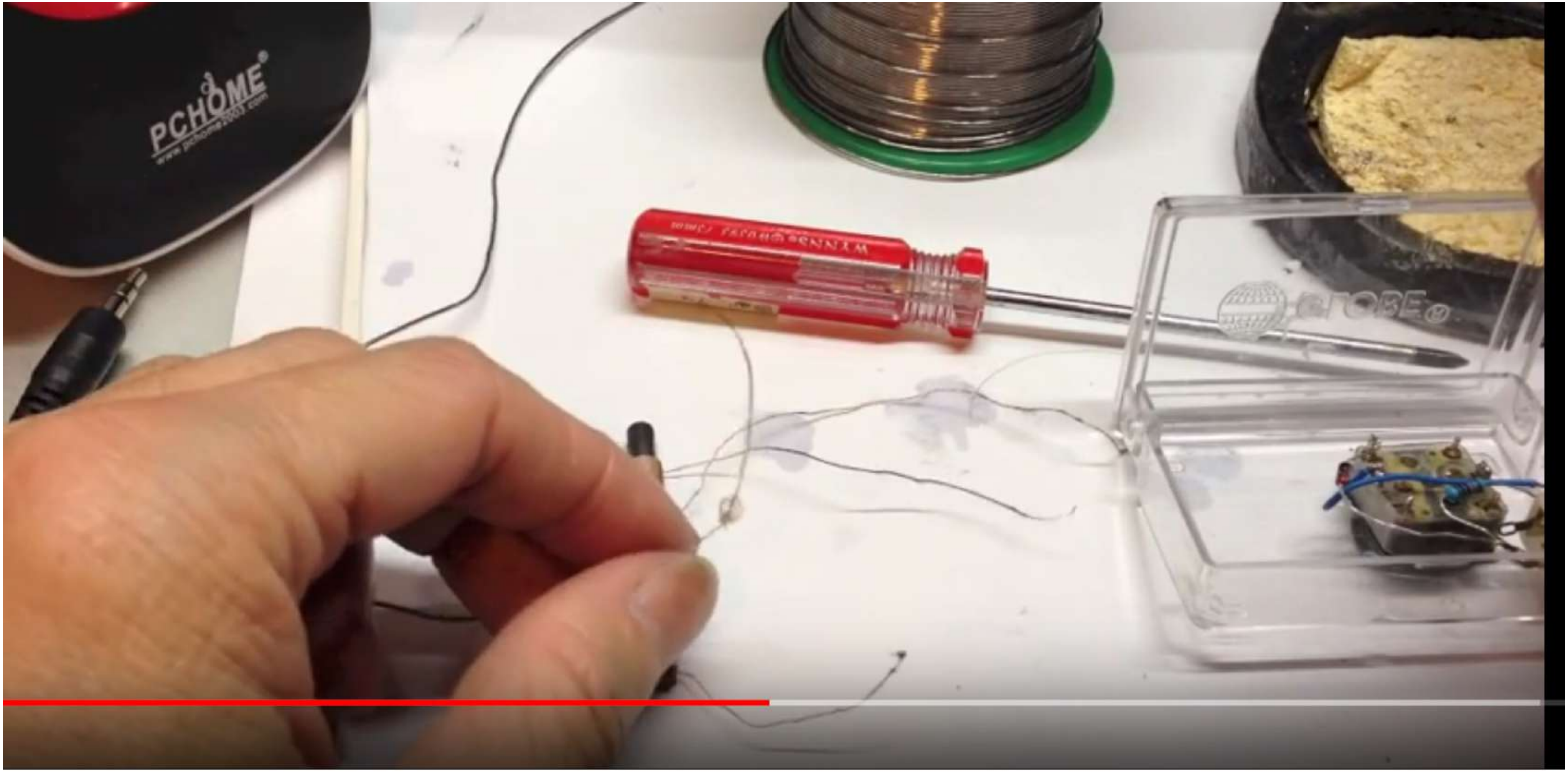
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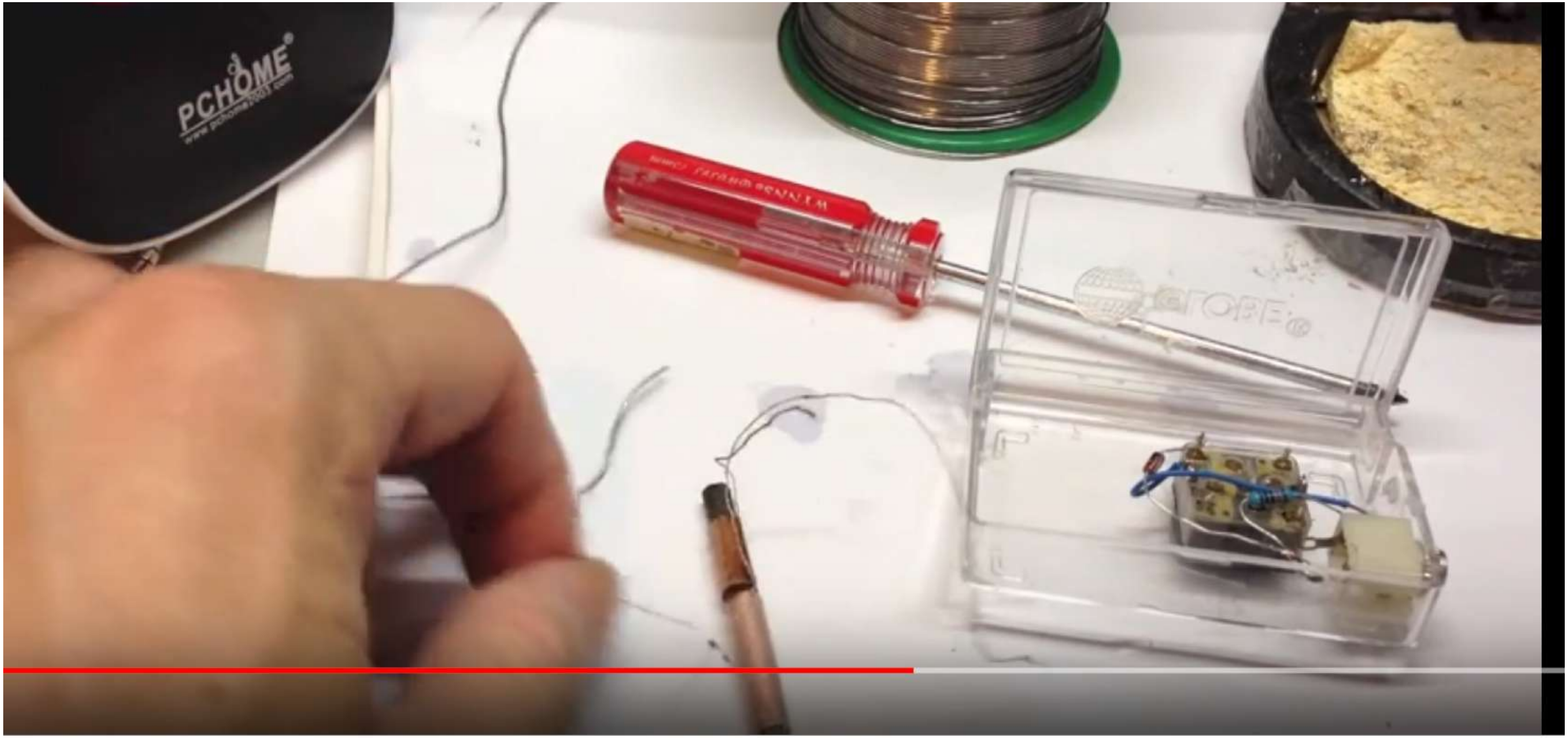
HOME
GLOBE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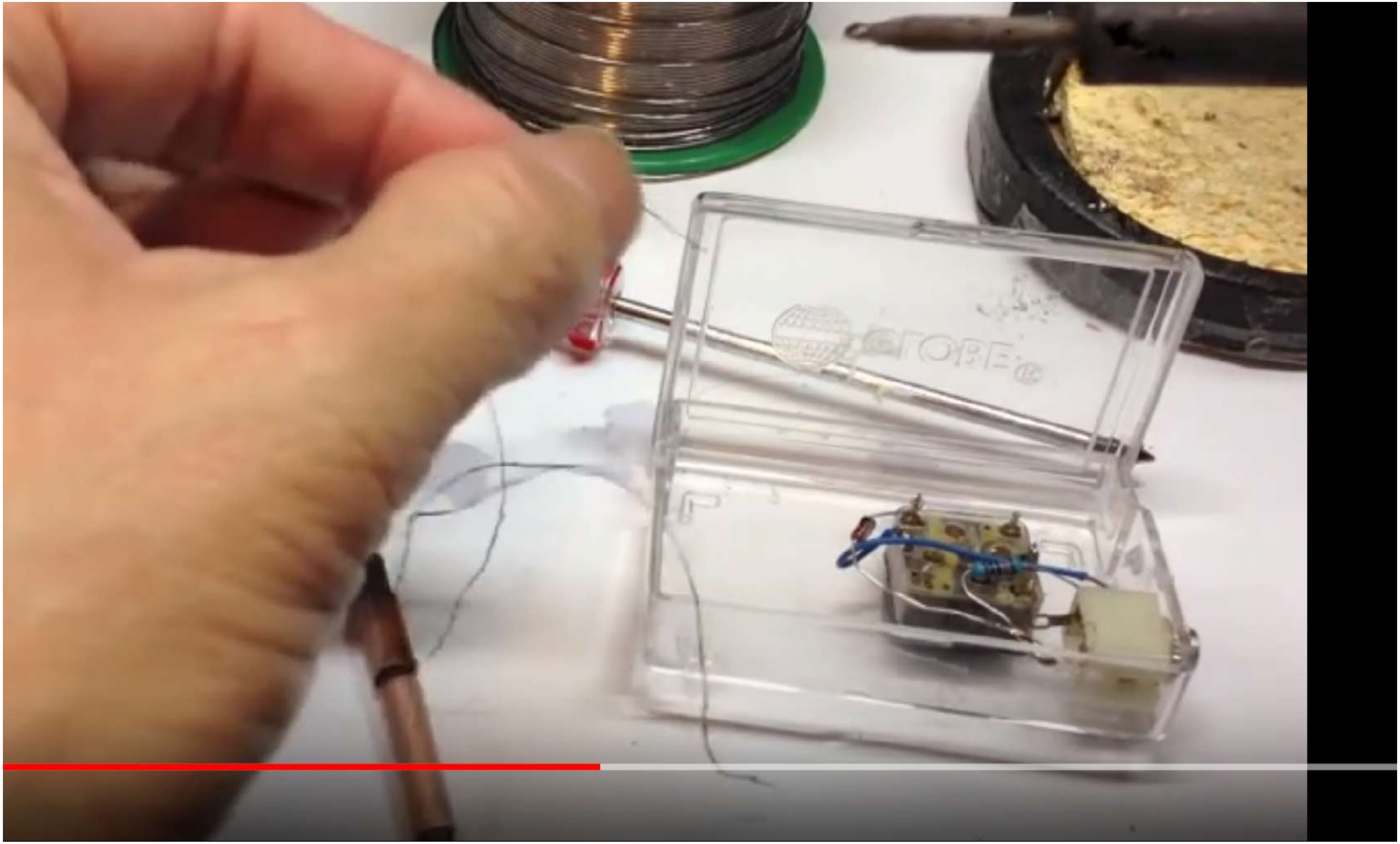

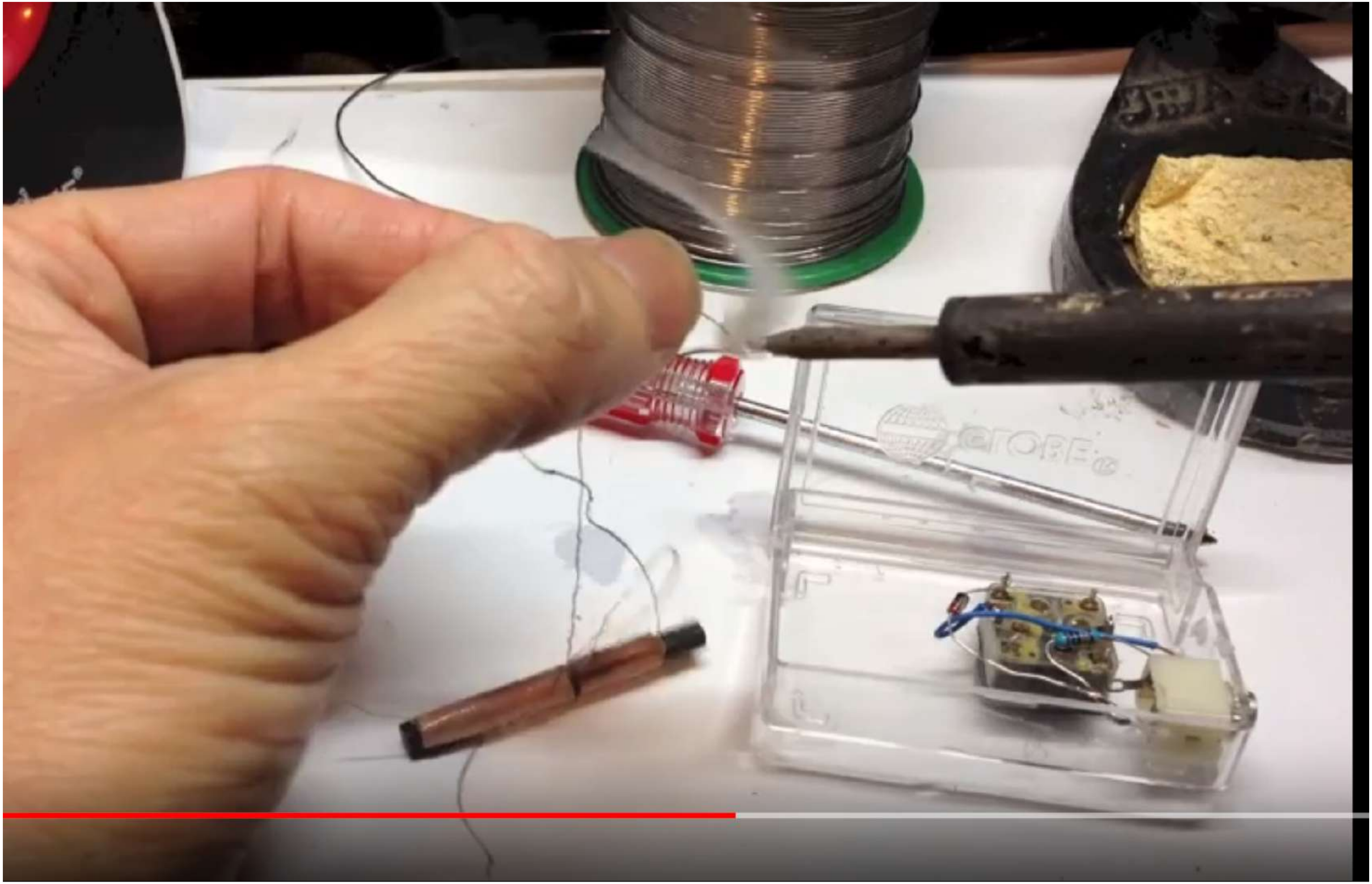


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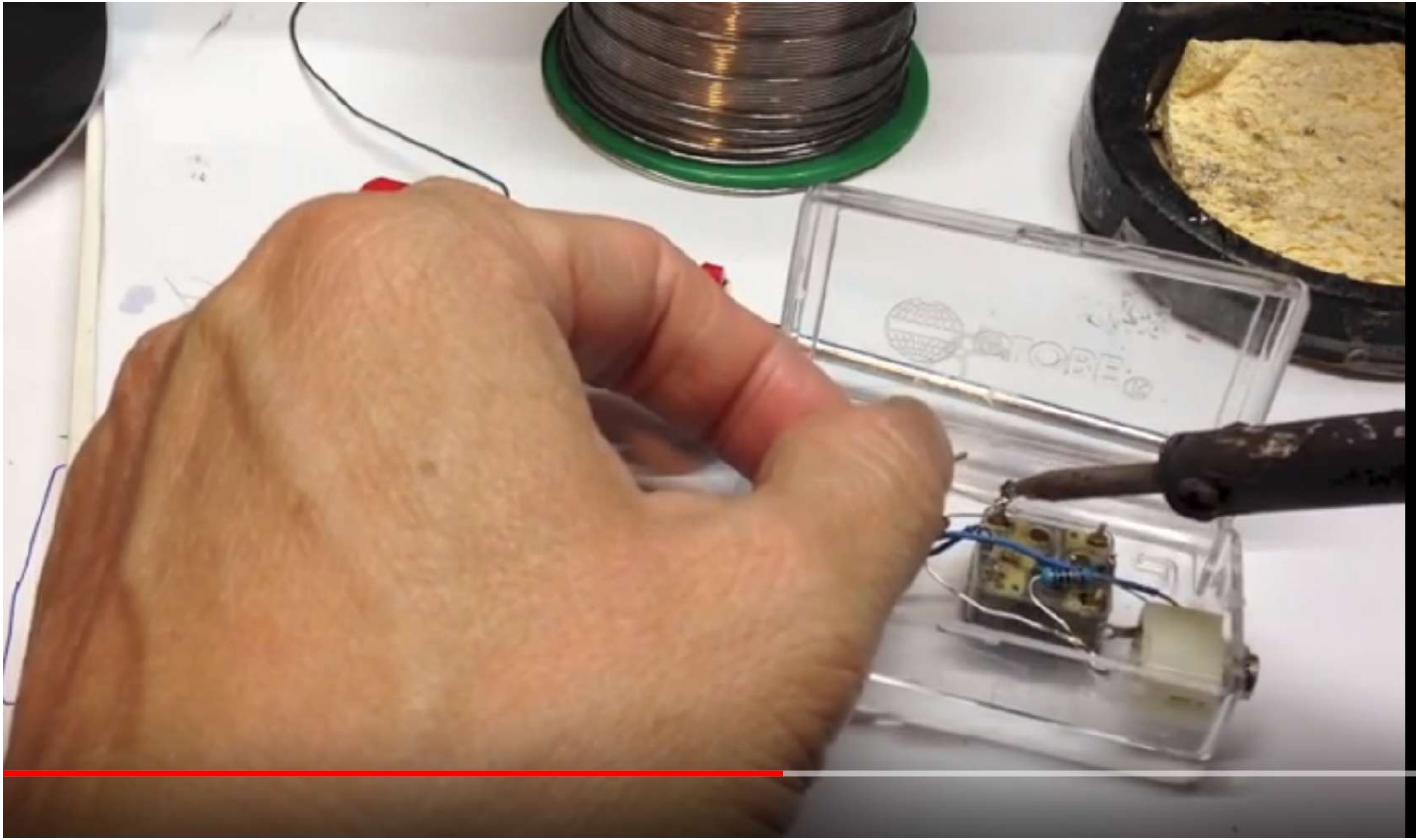

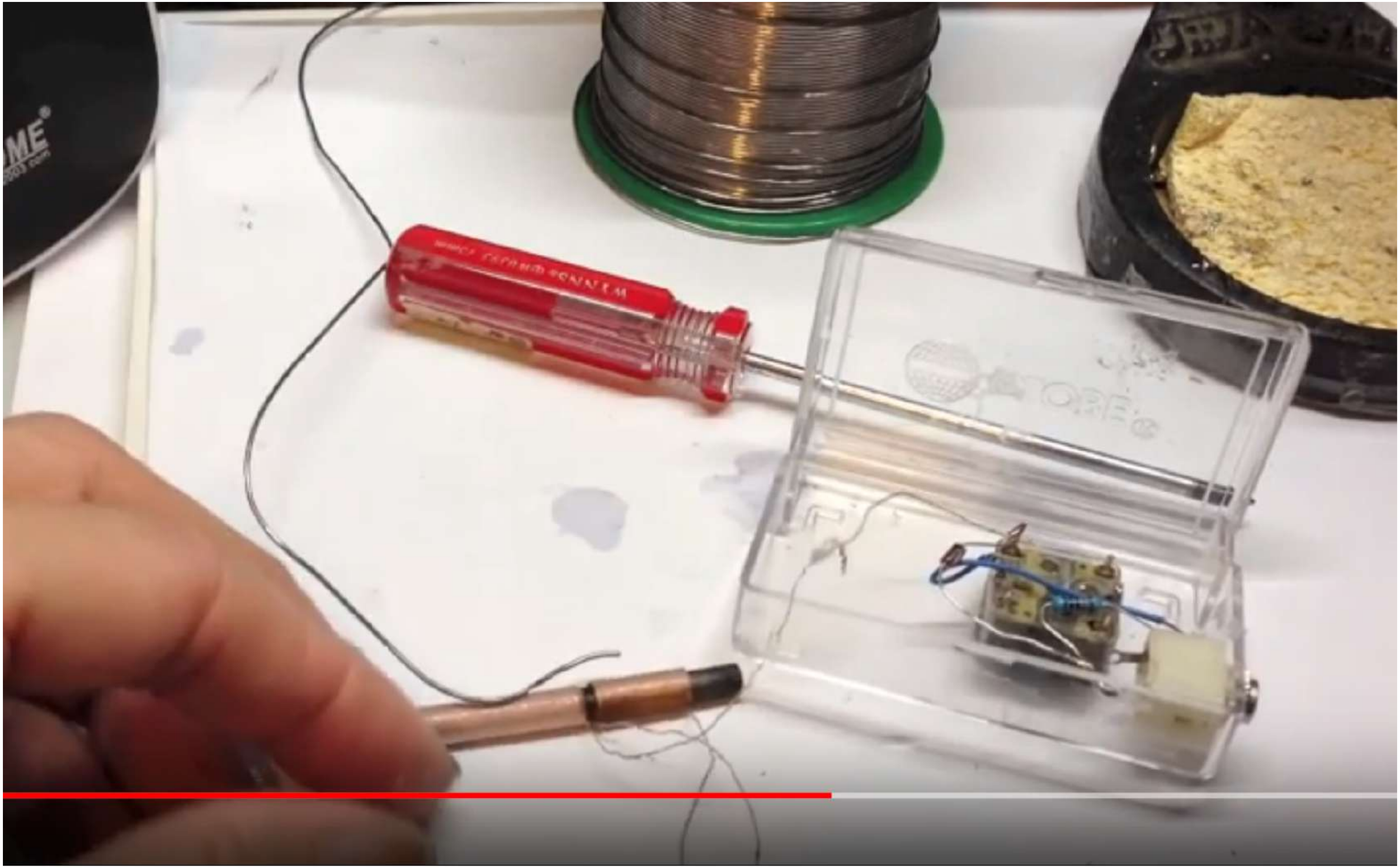

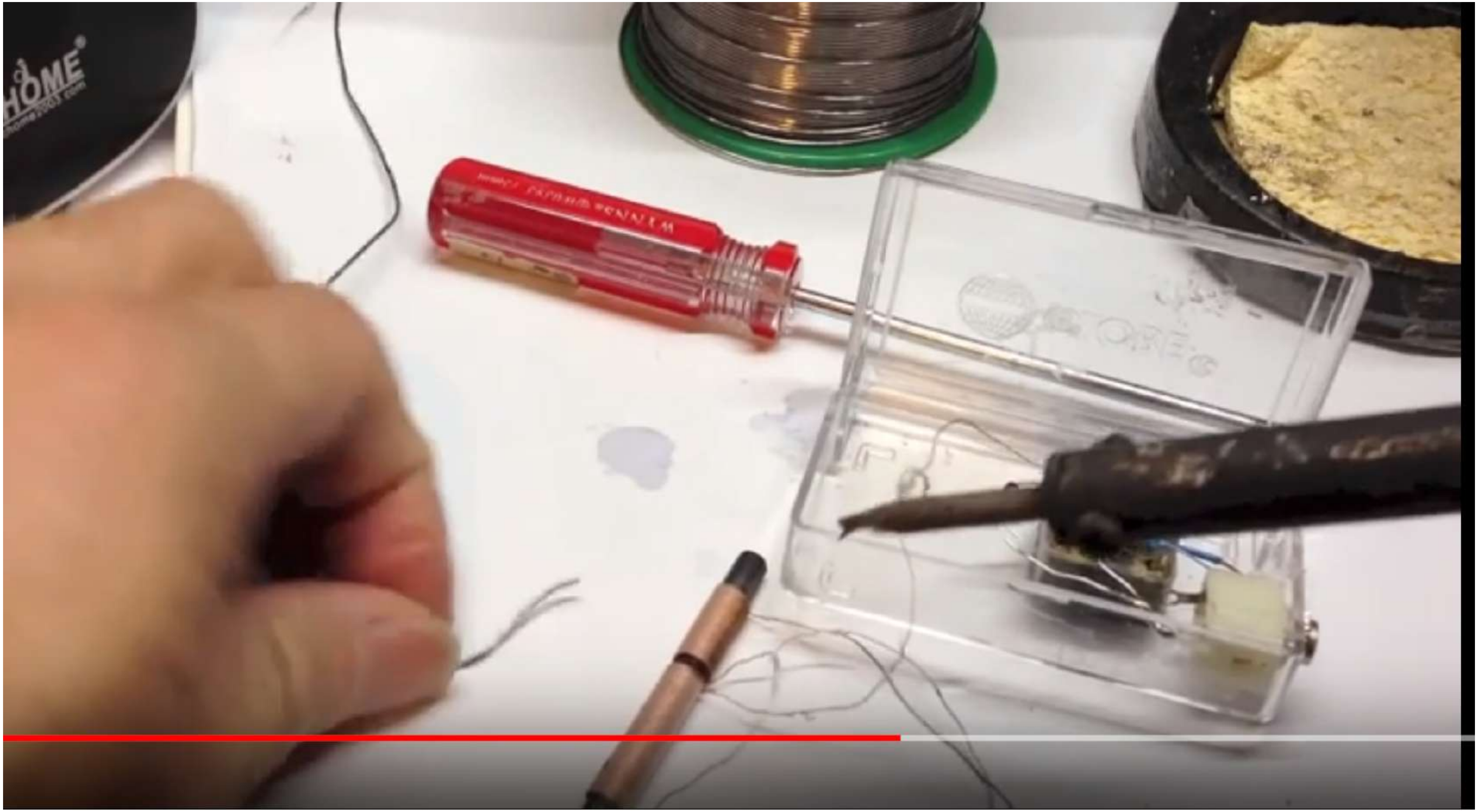
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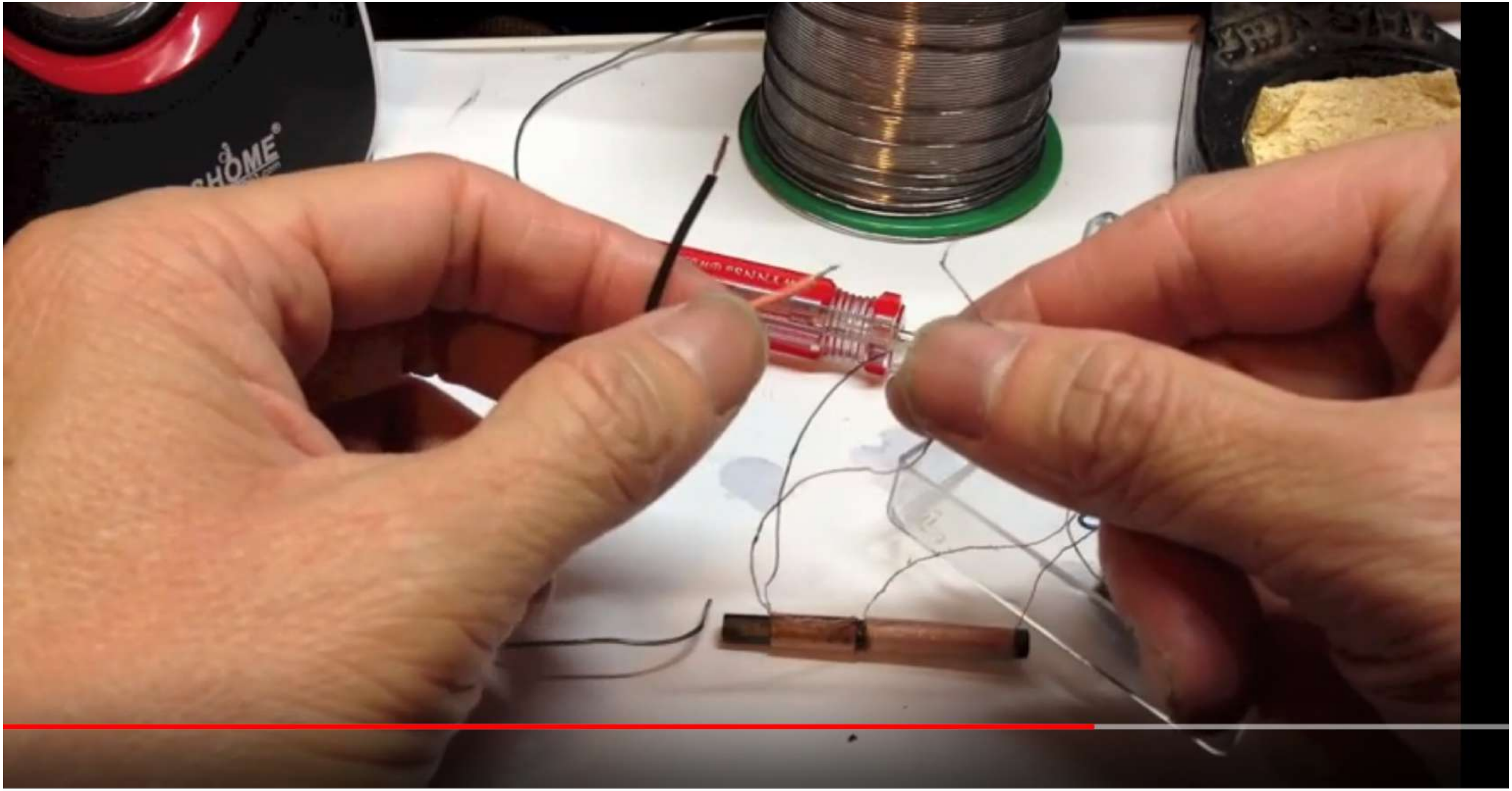

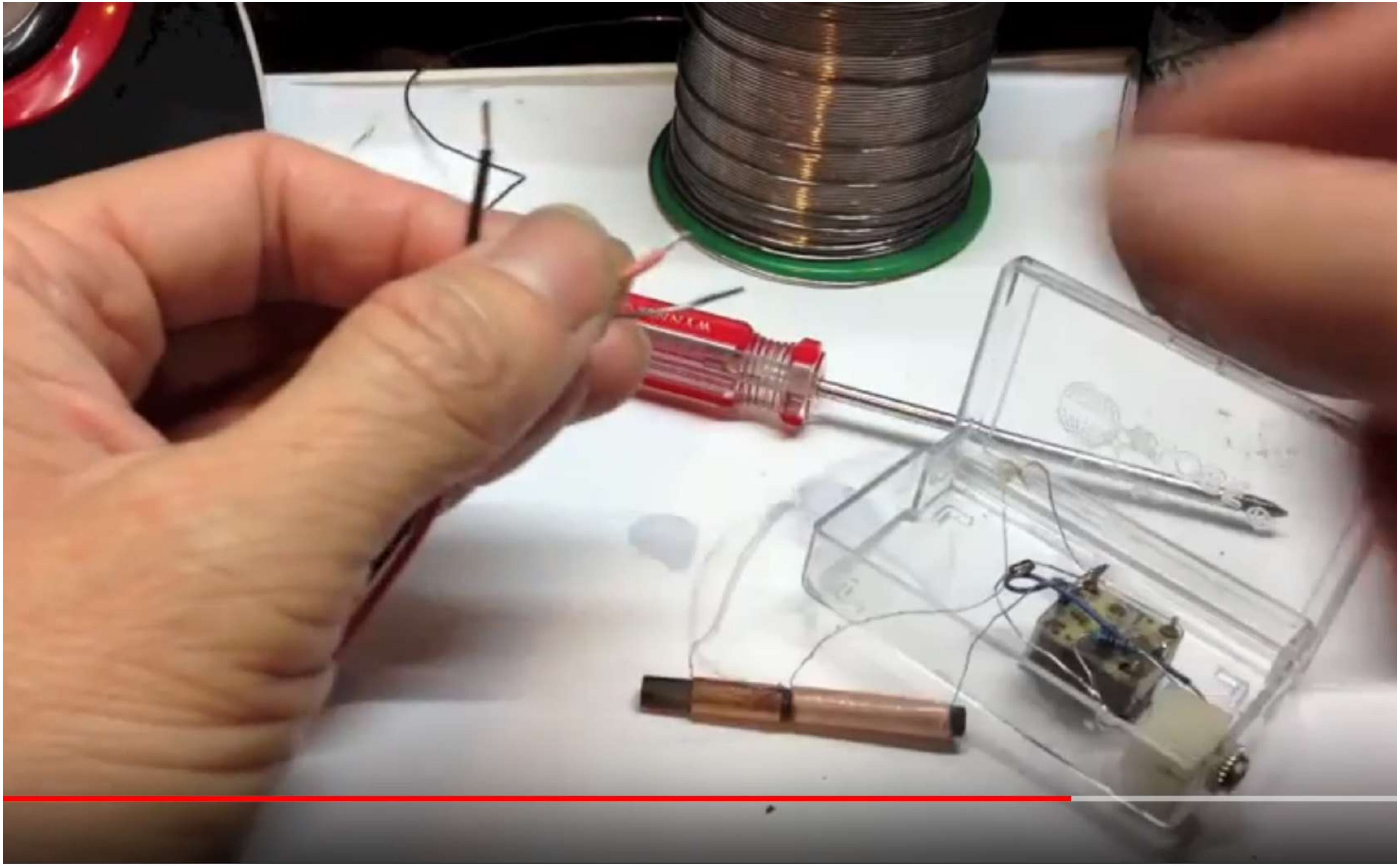


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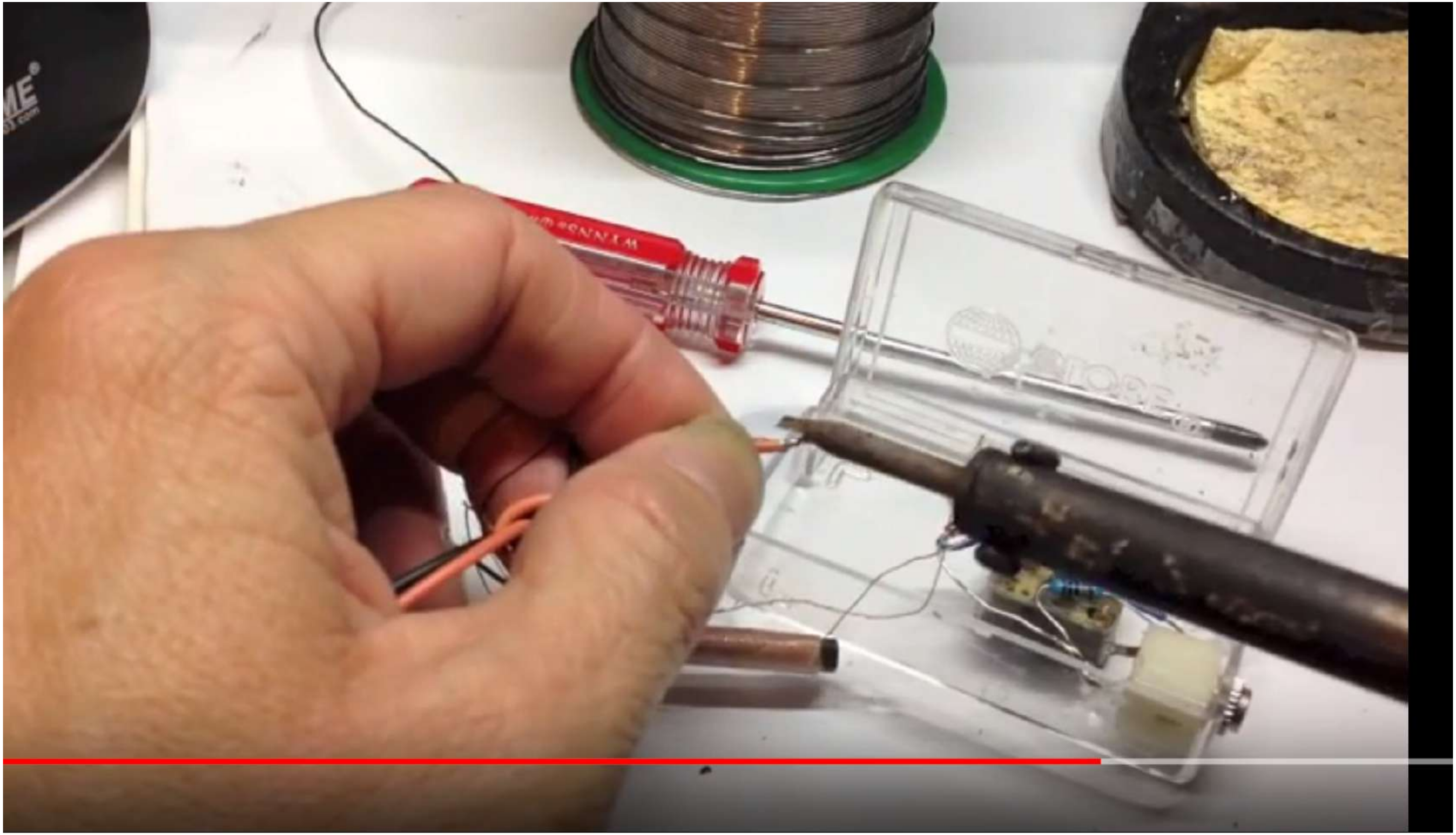


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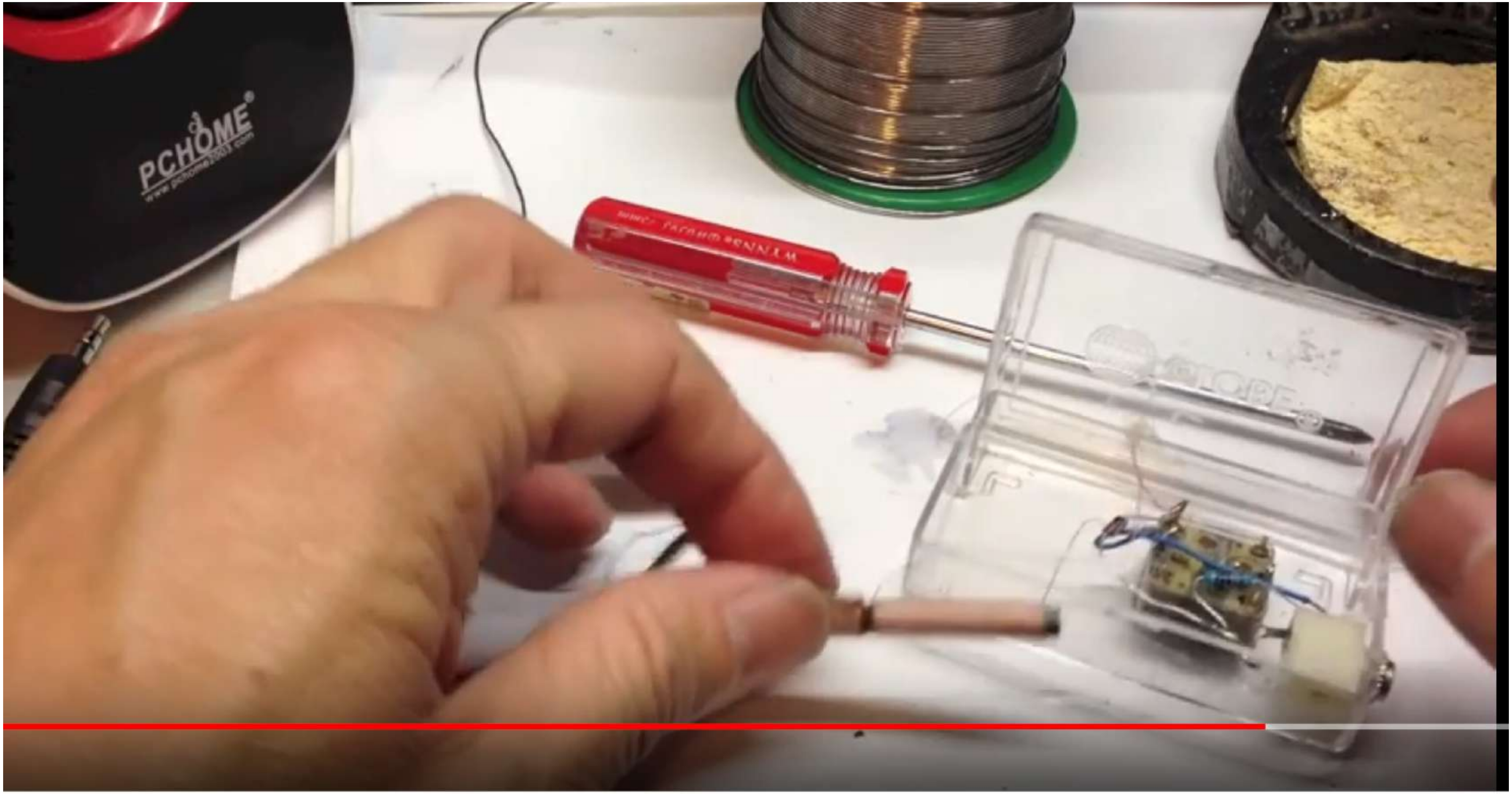
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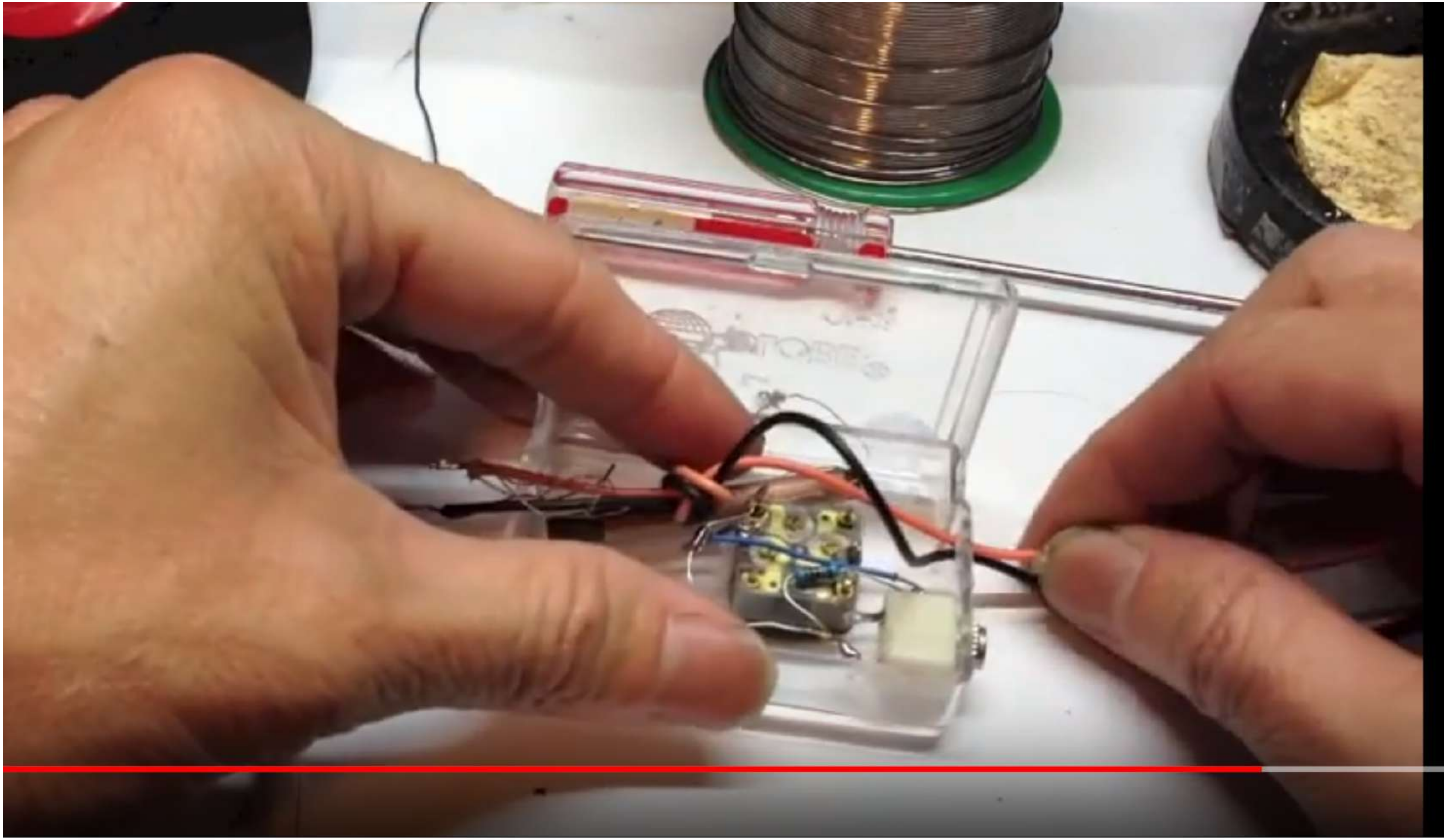

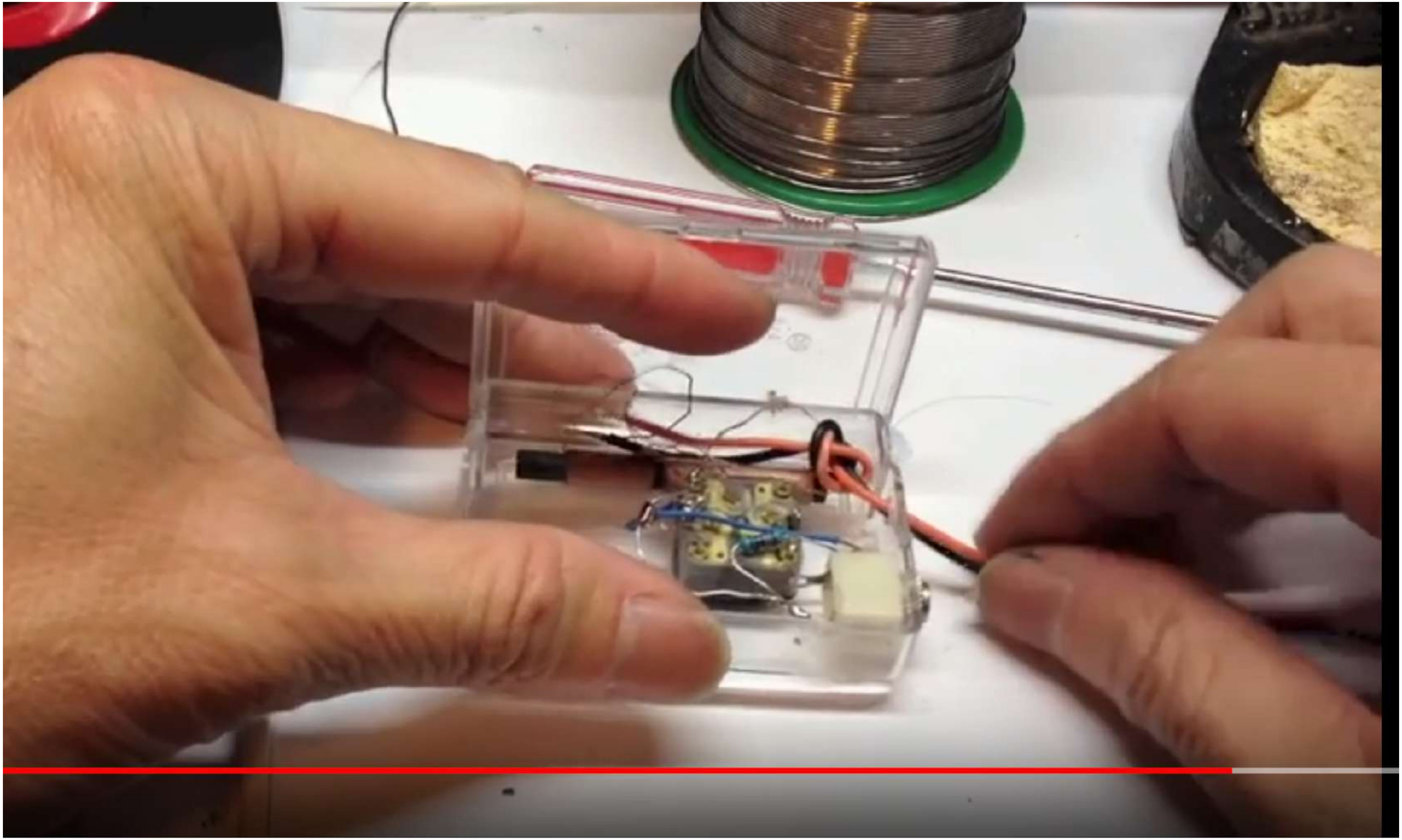

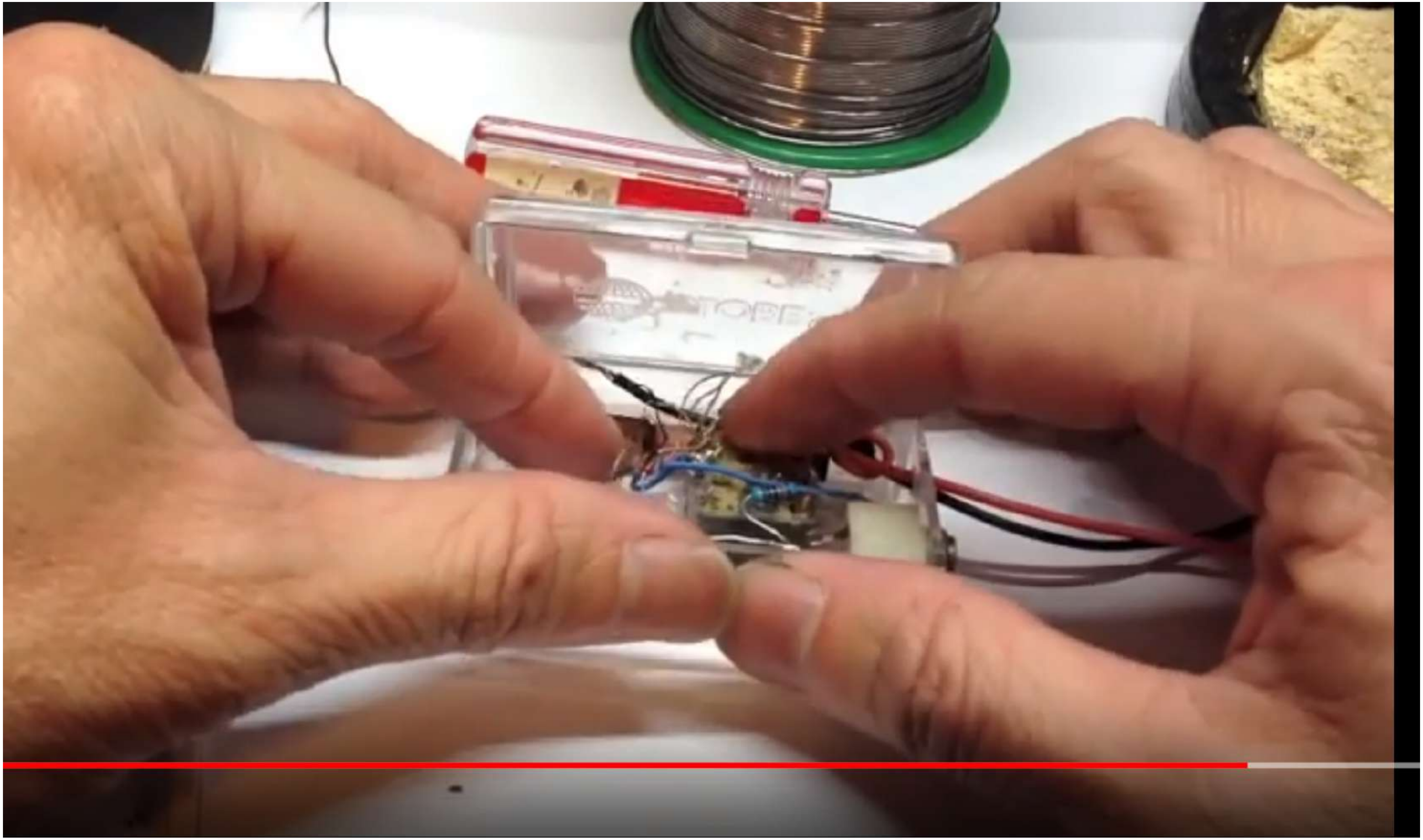

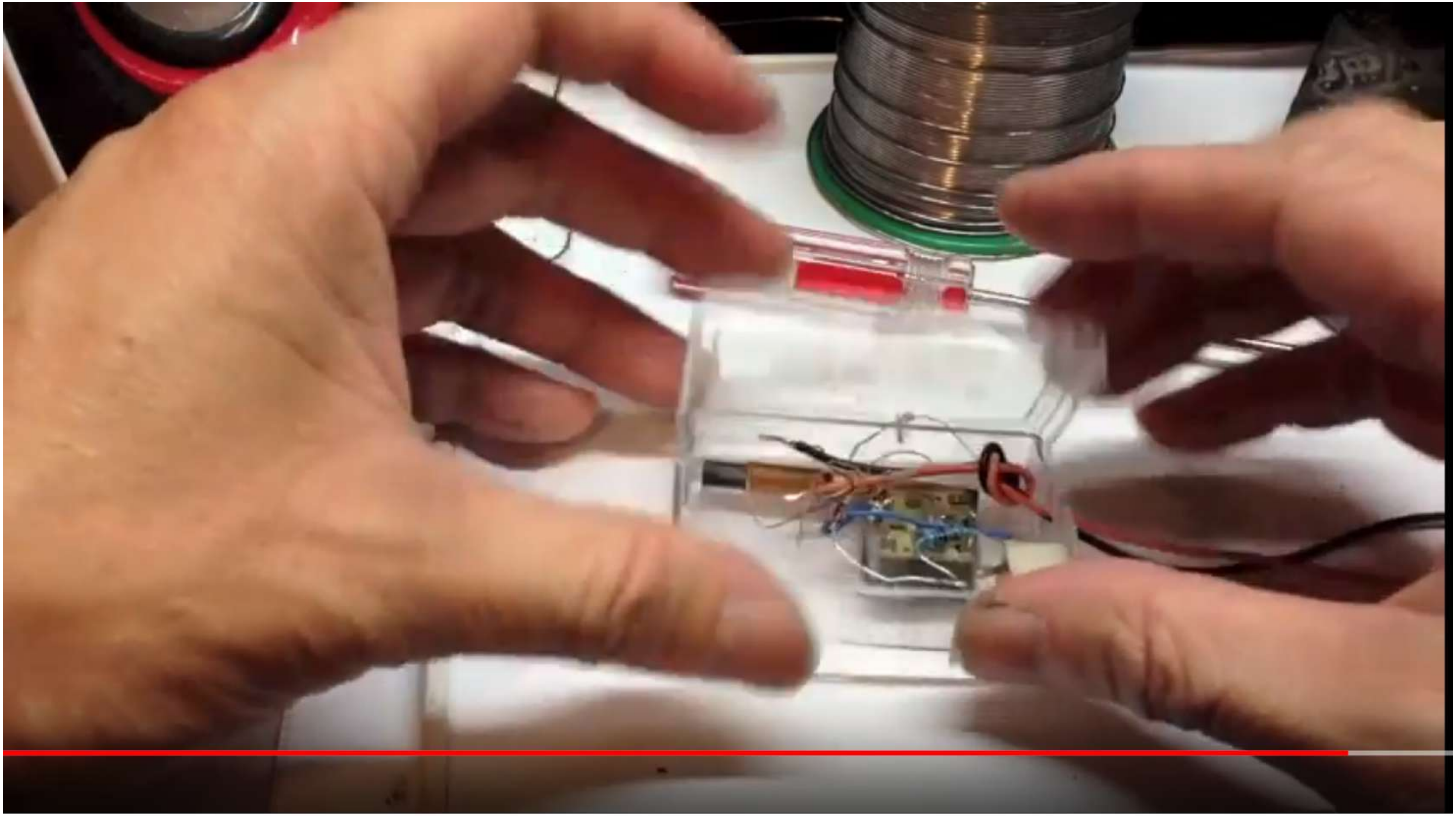

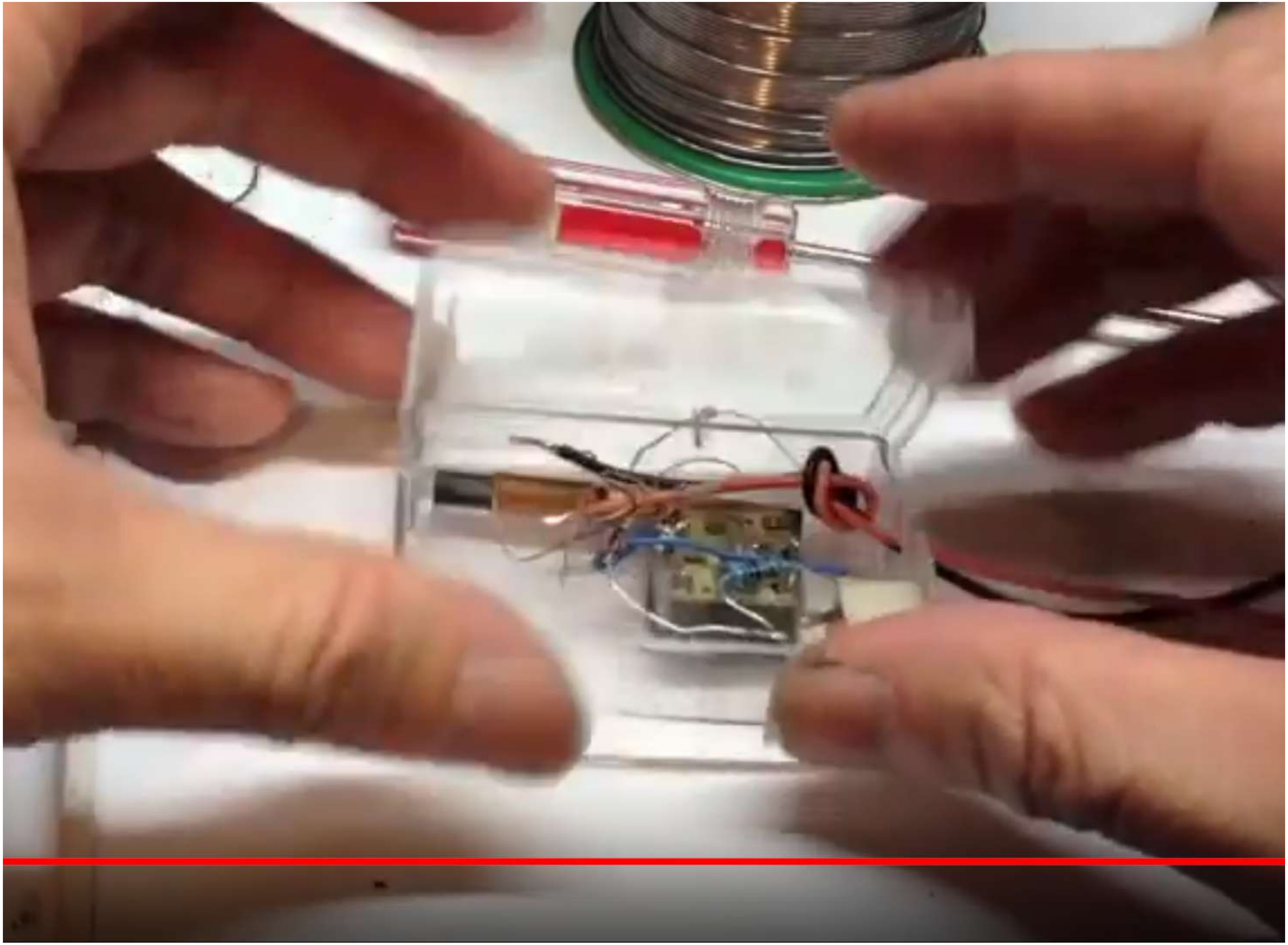

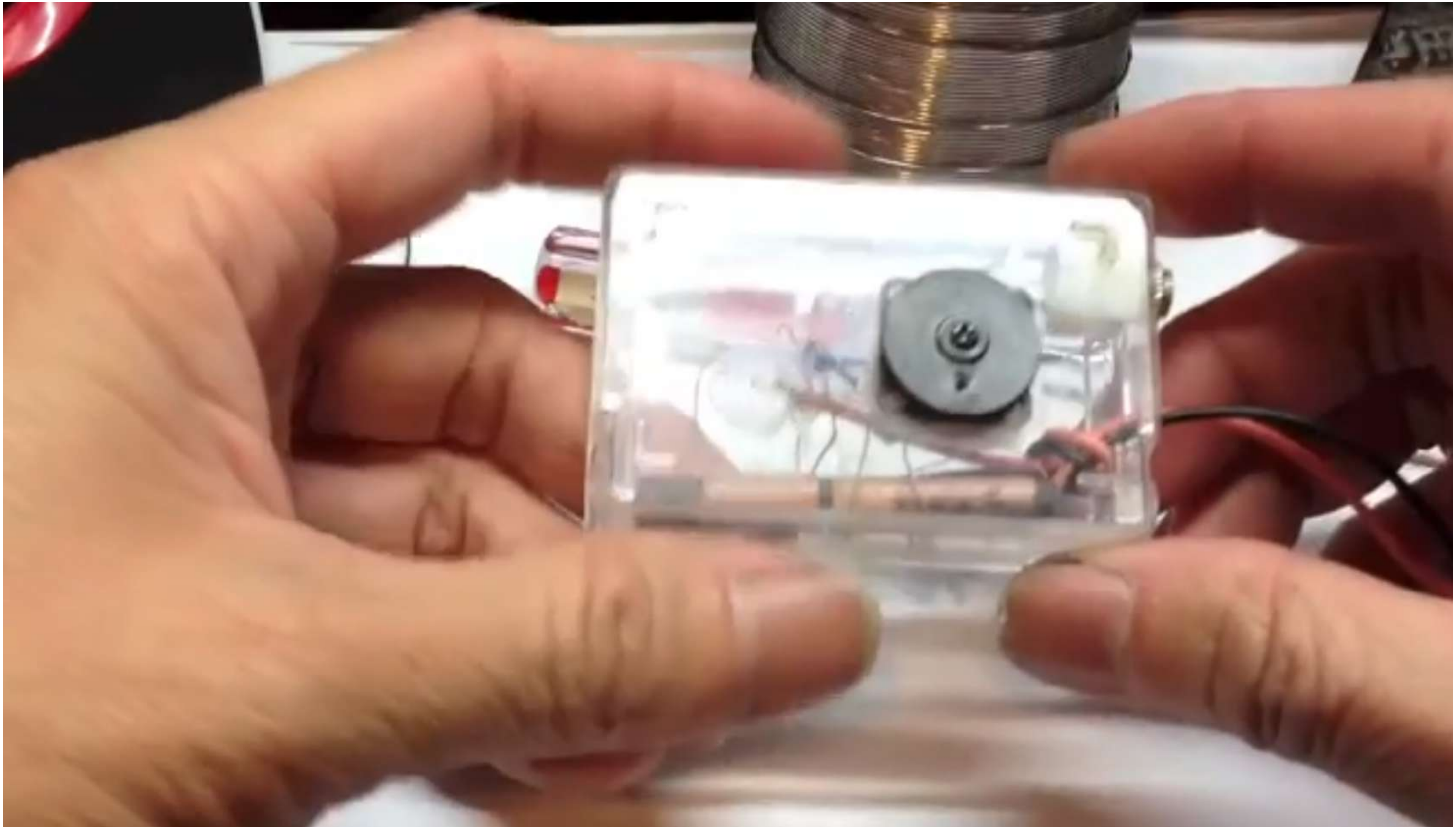

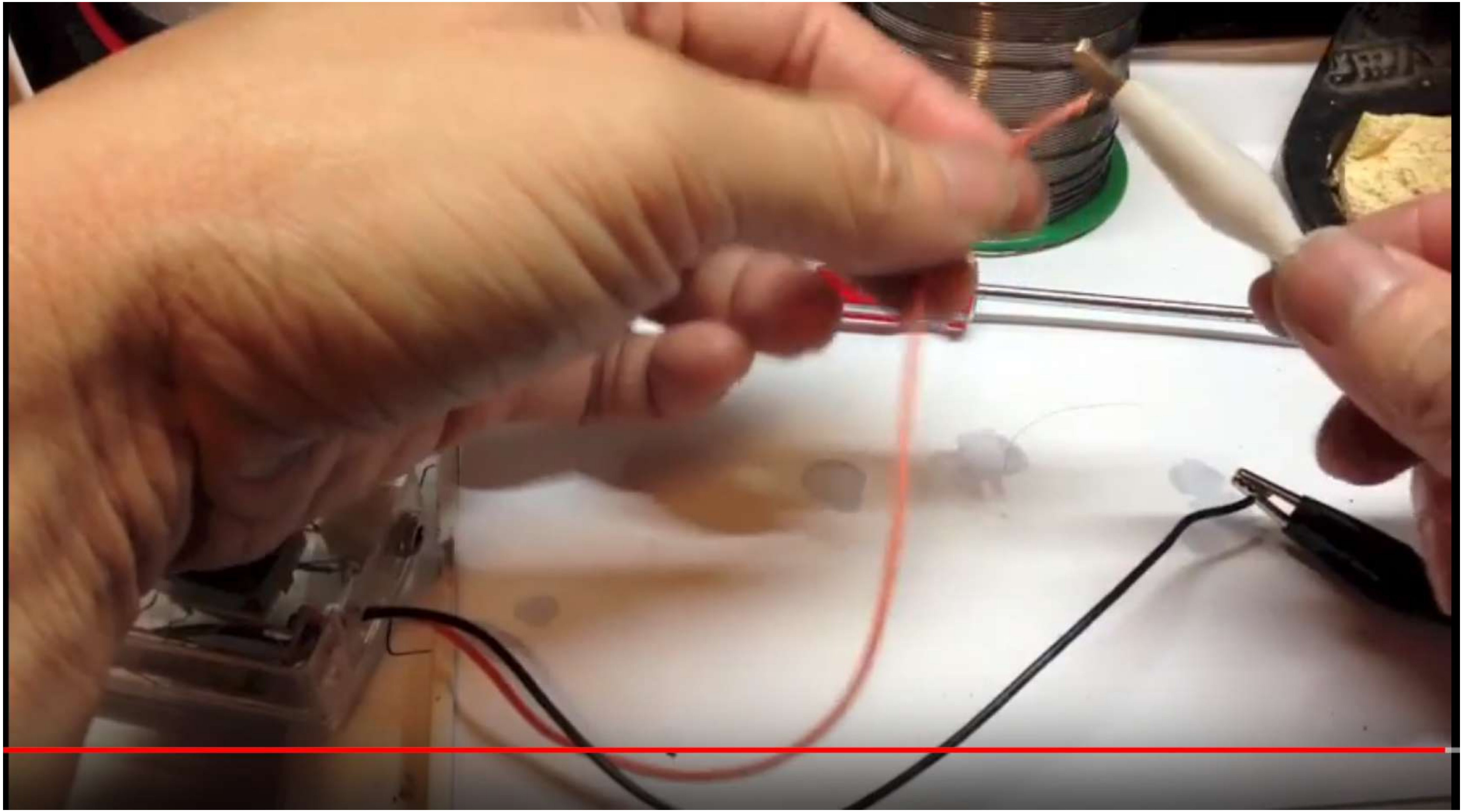

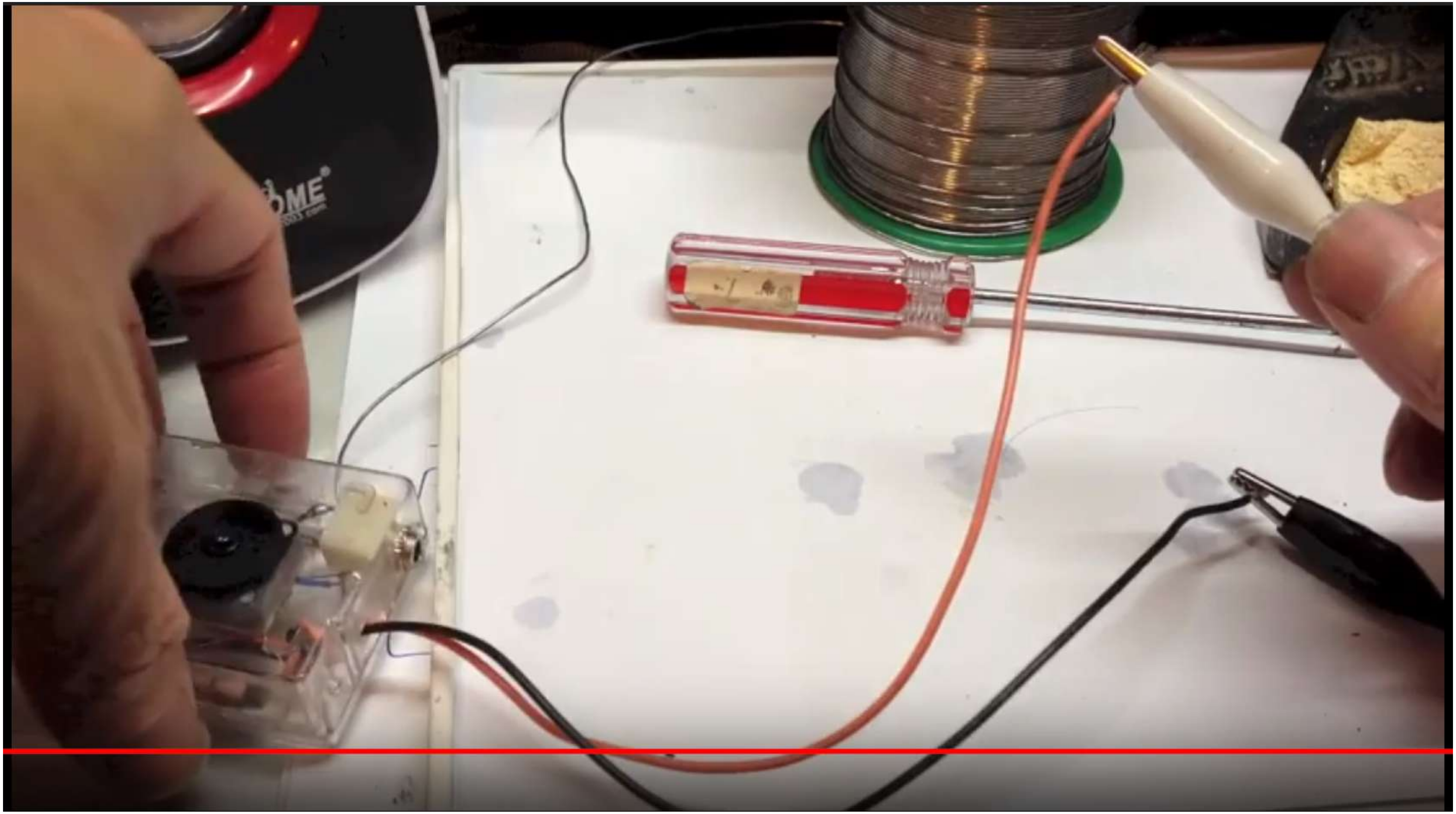

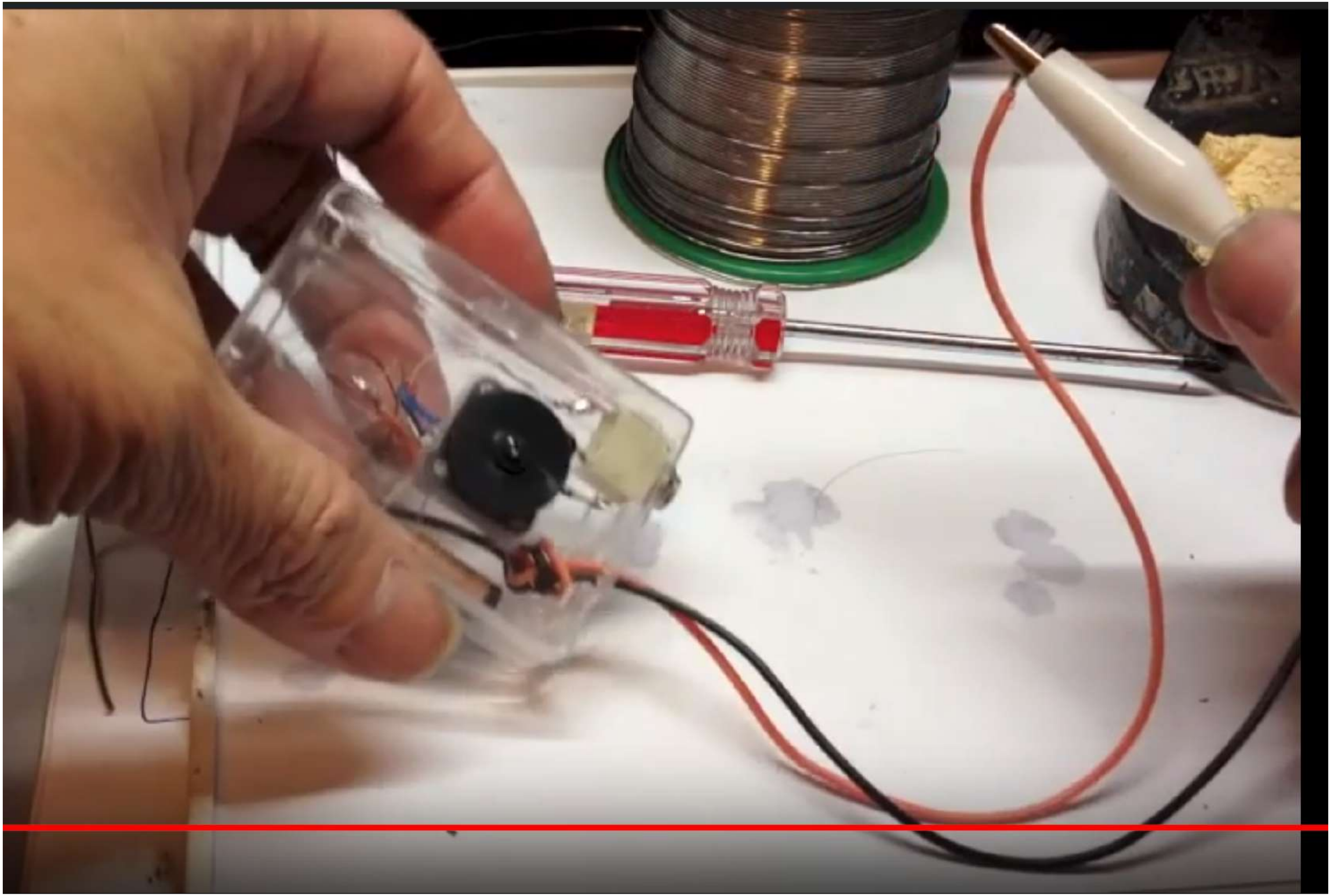

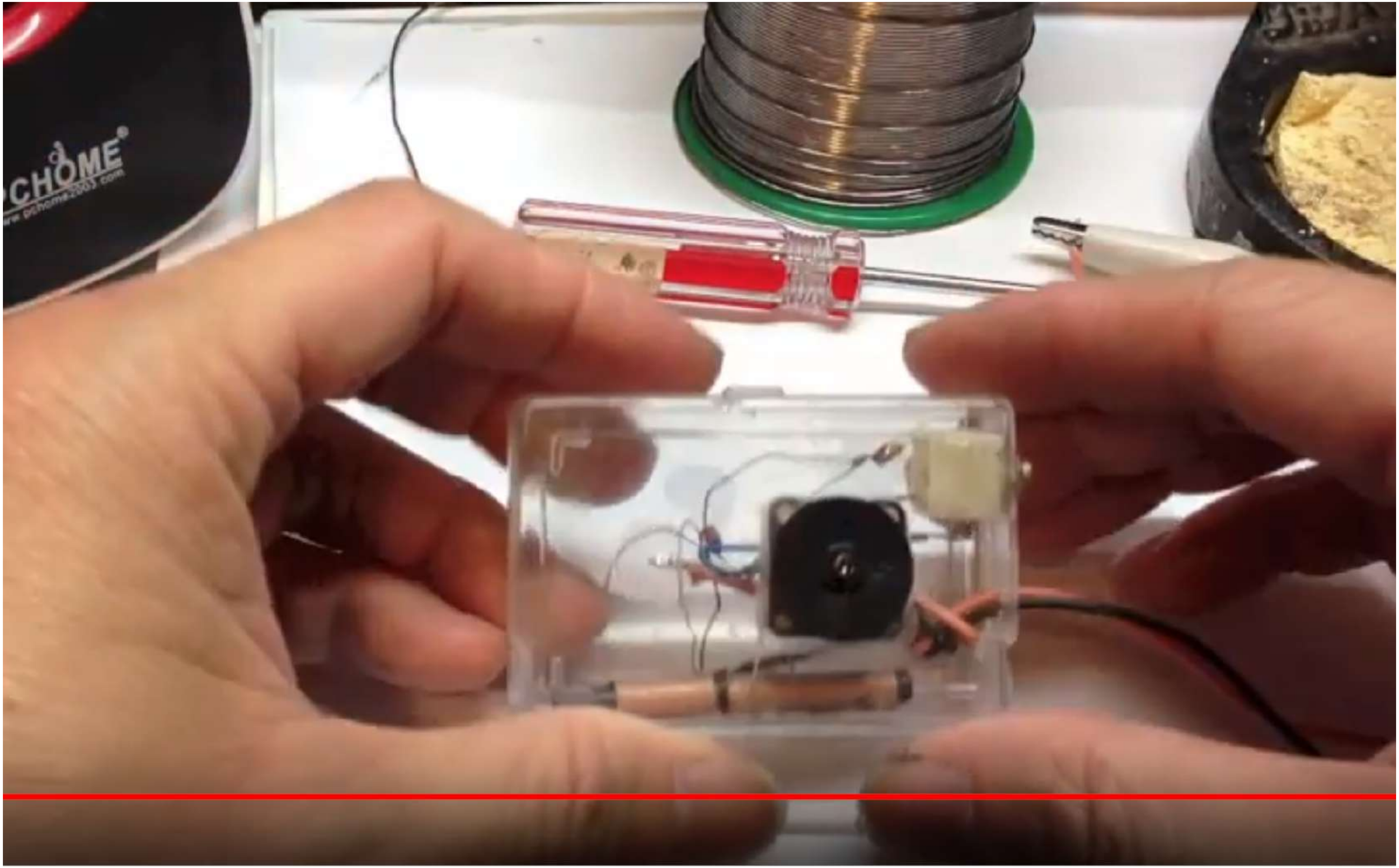
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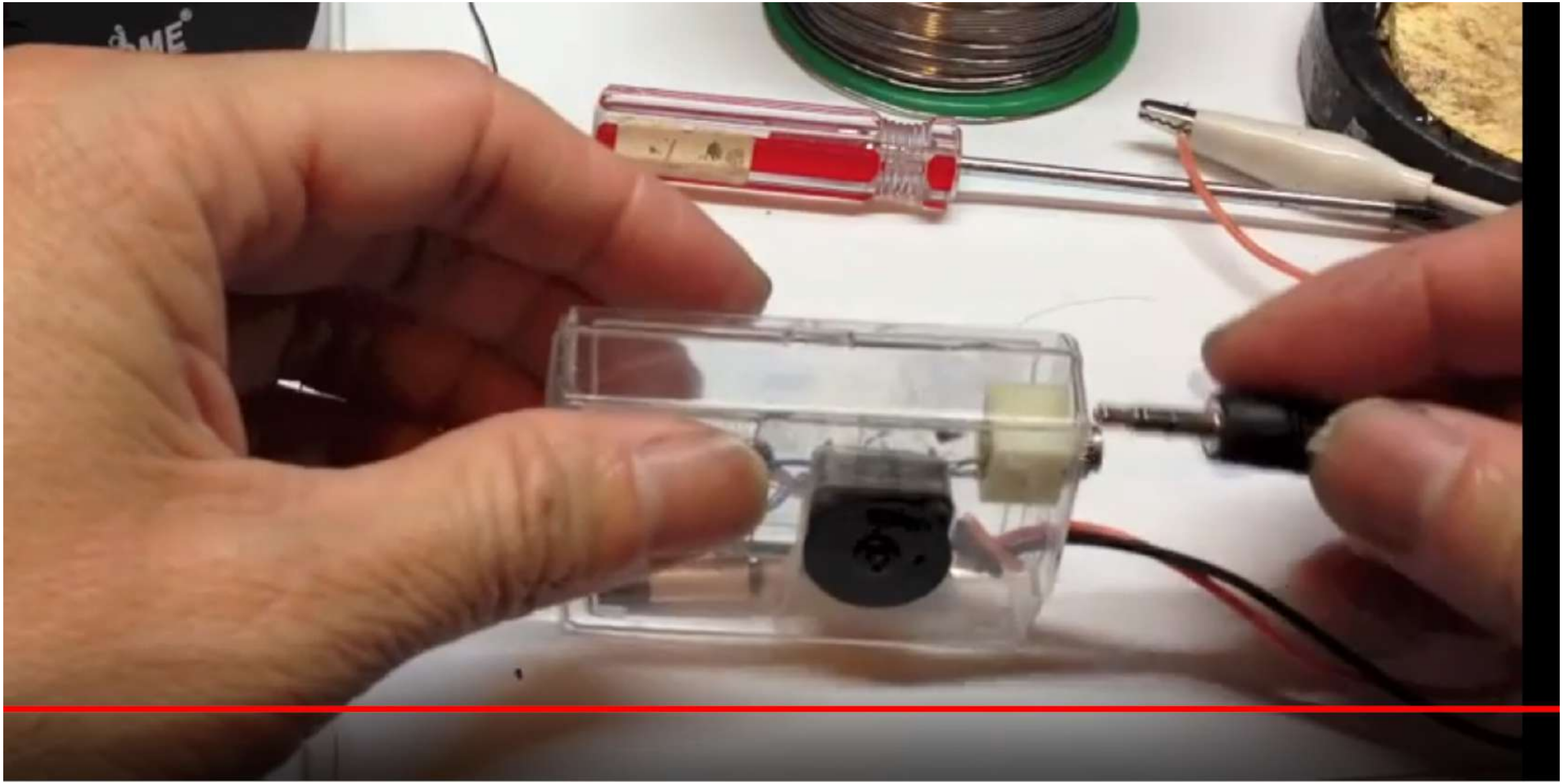
www.pchome2003.com

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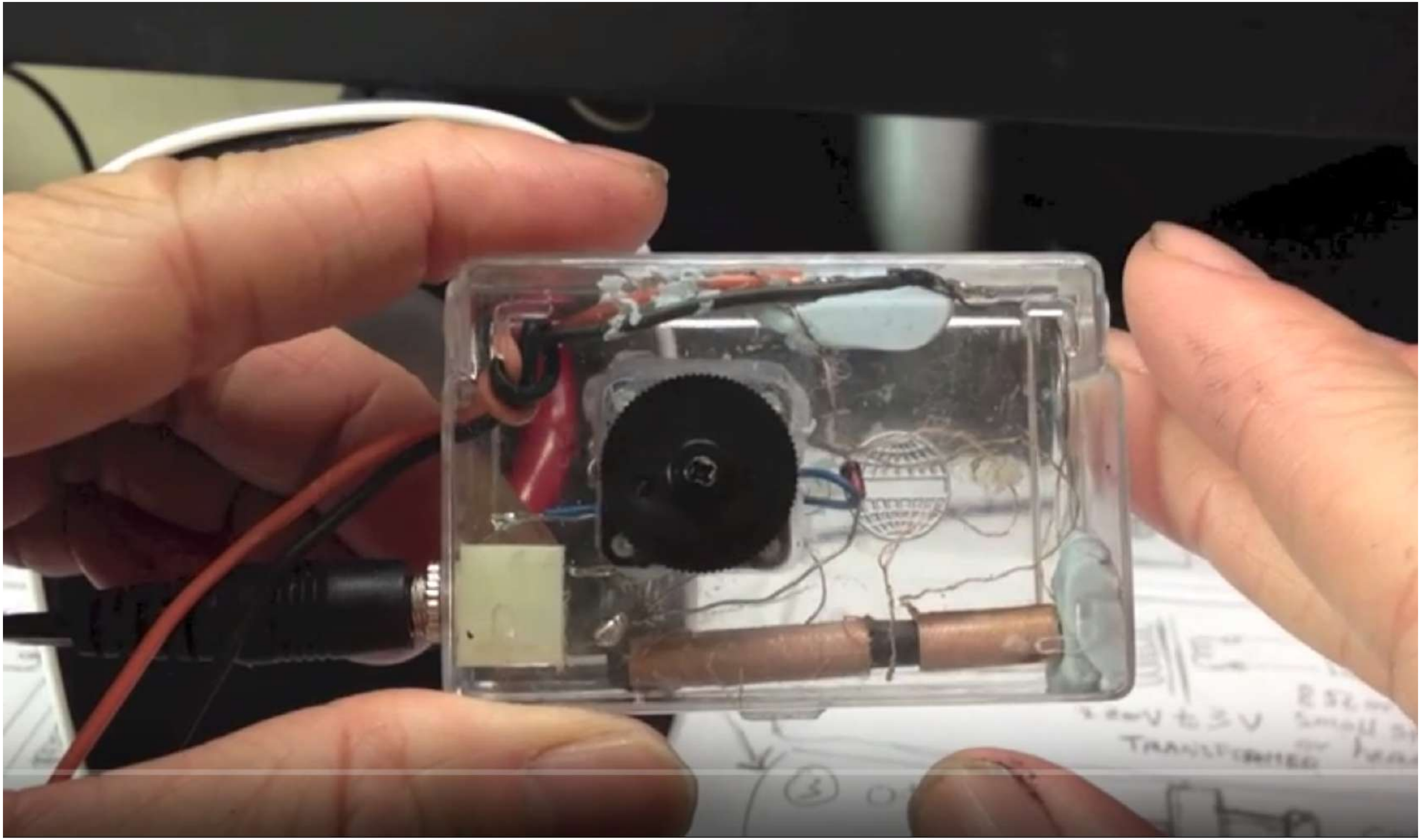

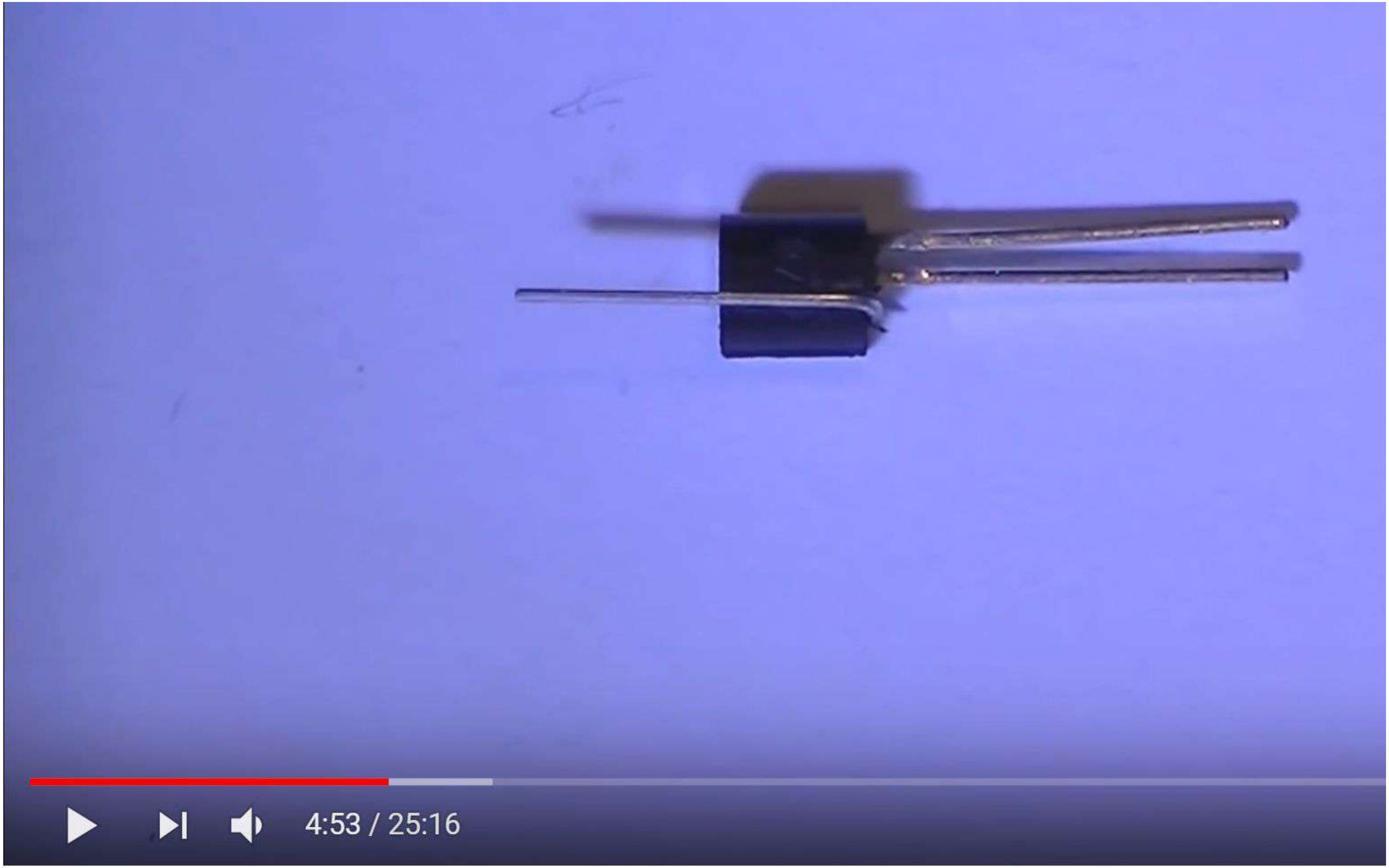

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High-Bright
22SWG
Order
Alloy
60/40
Sn/Pb
Weight
100gms
Diameter
0.7mm
Rapid
rapidonline.com
You can buy FM transmitters from :
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5:24 / 25:16

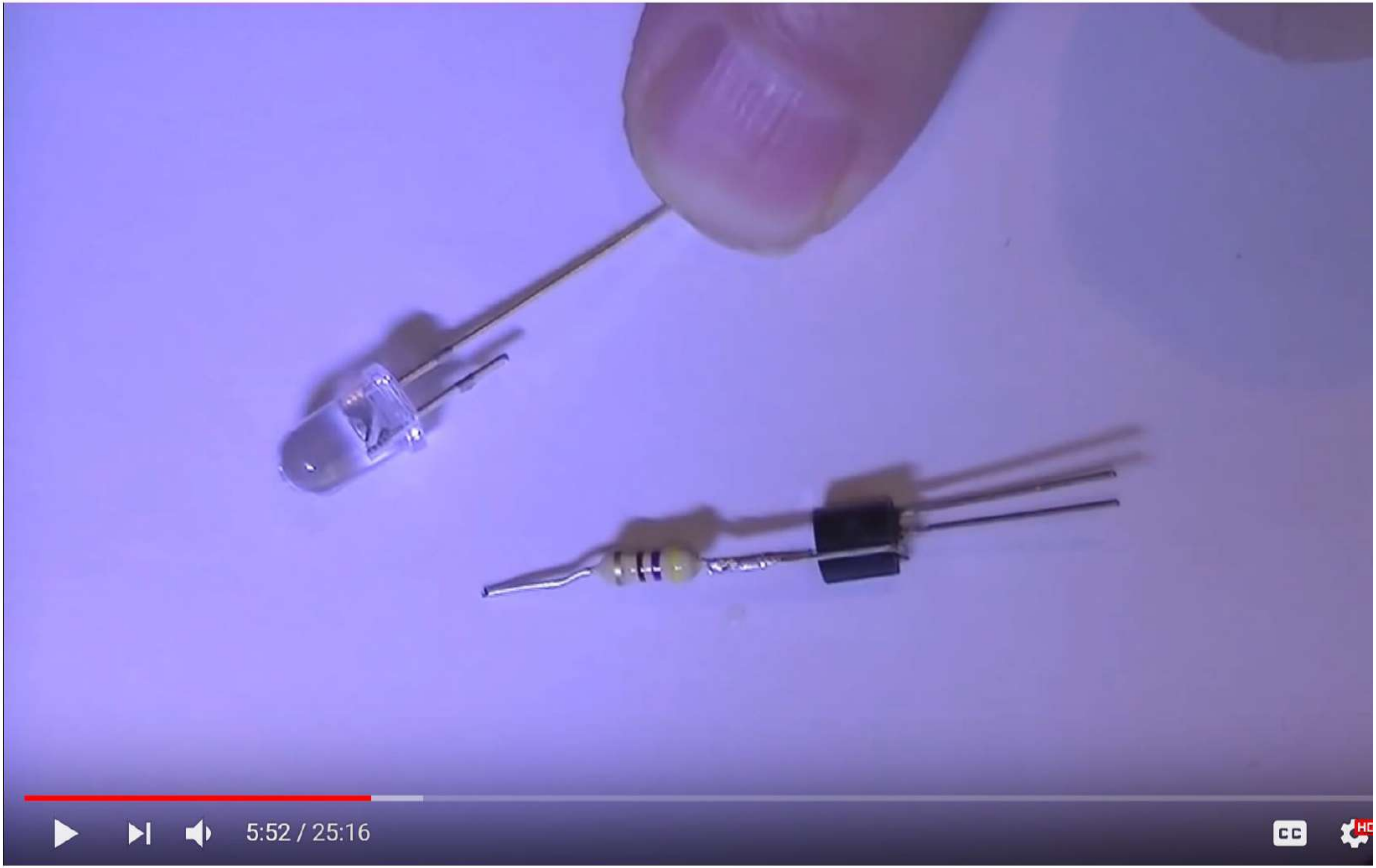
Lets build a RF Pen detector .A good tool for testing small FM transmitters.

48.706 views

420

ets build a RF Pen detector .A good tool for testing small FM transmitters.

8,706 views



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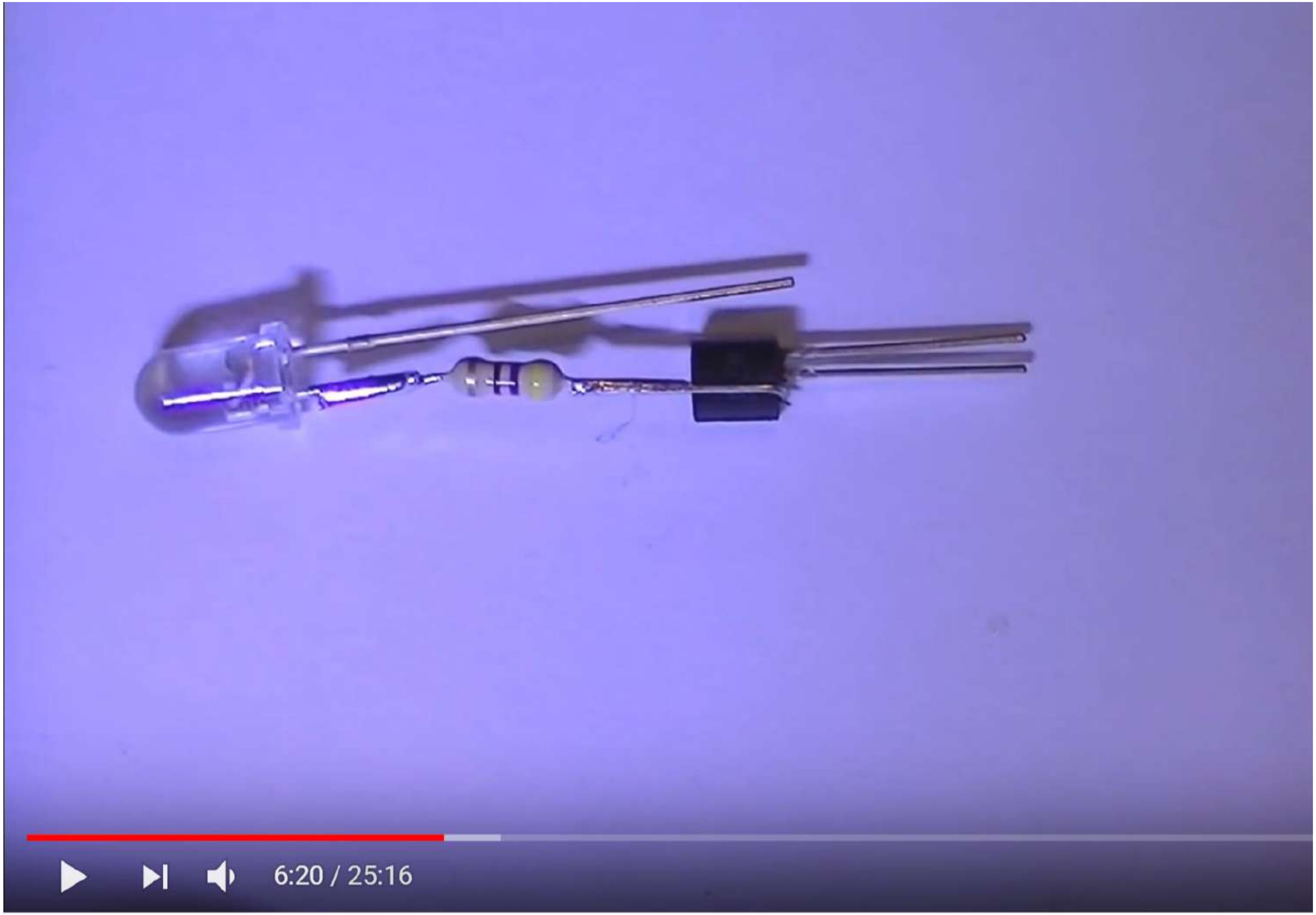

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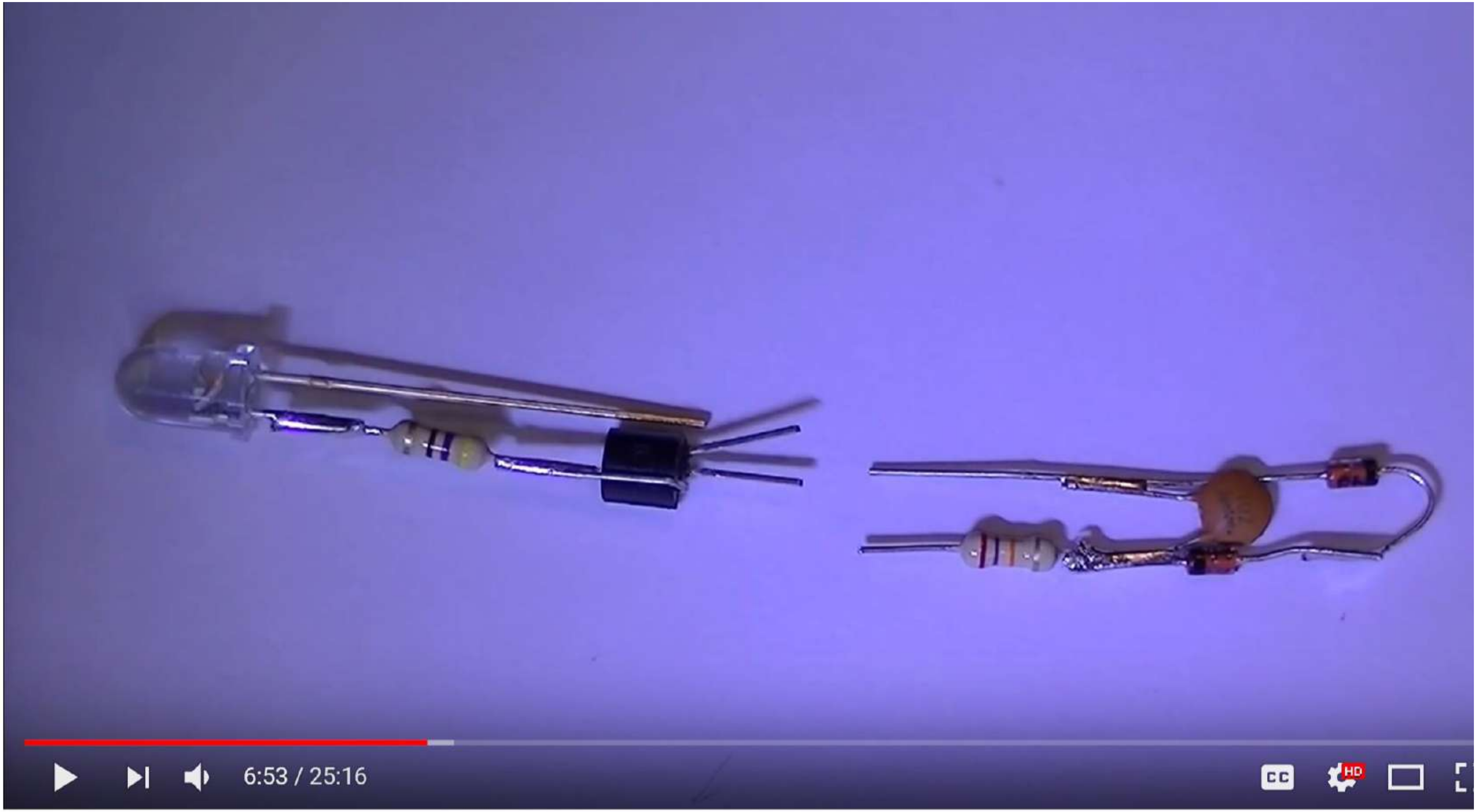

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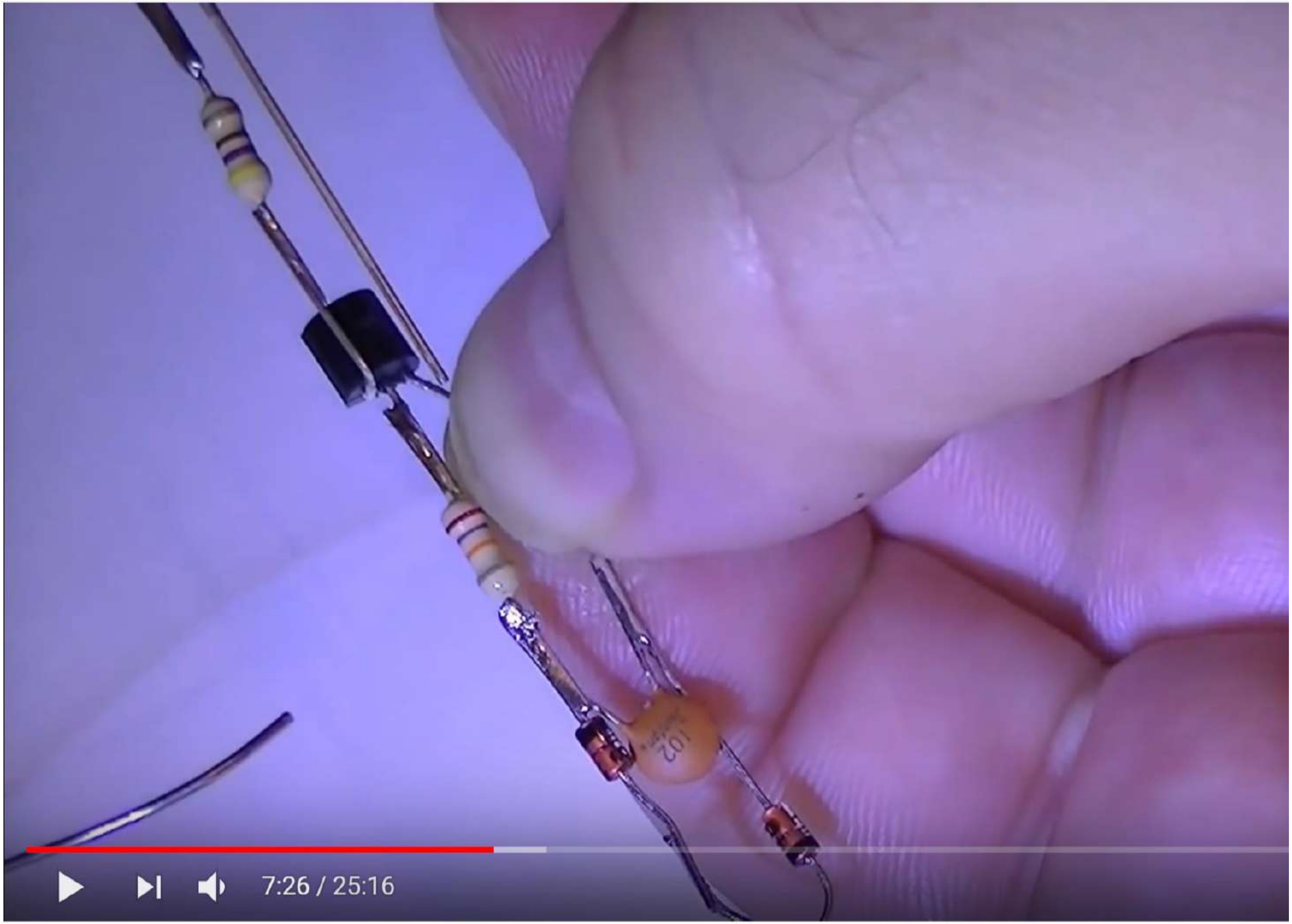

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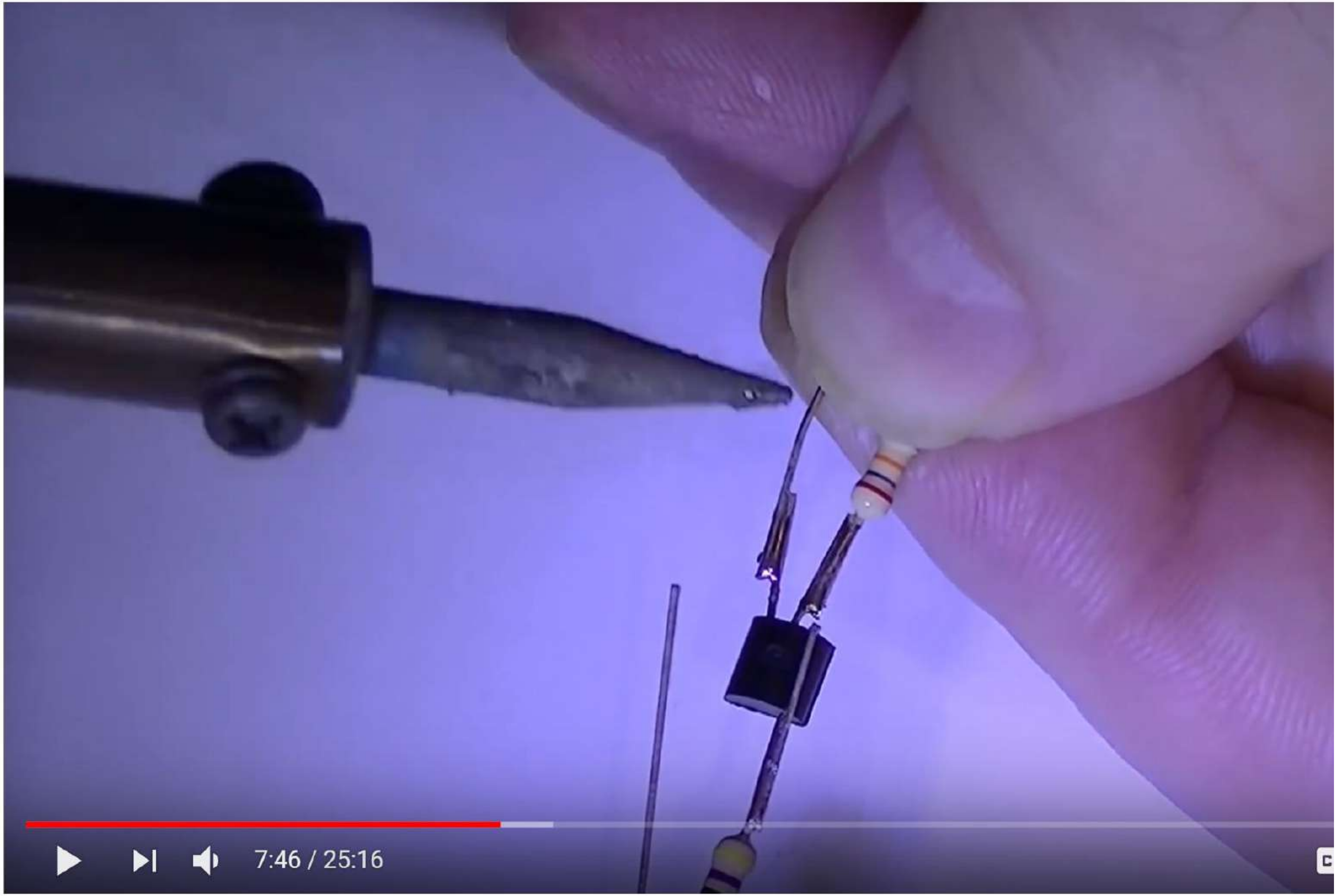

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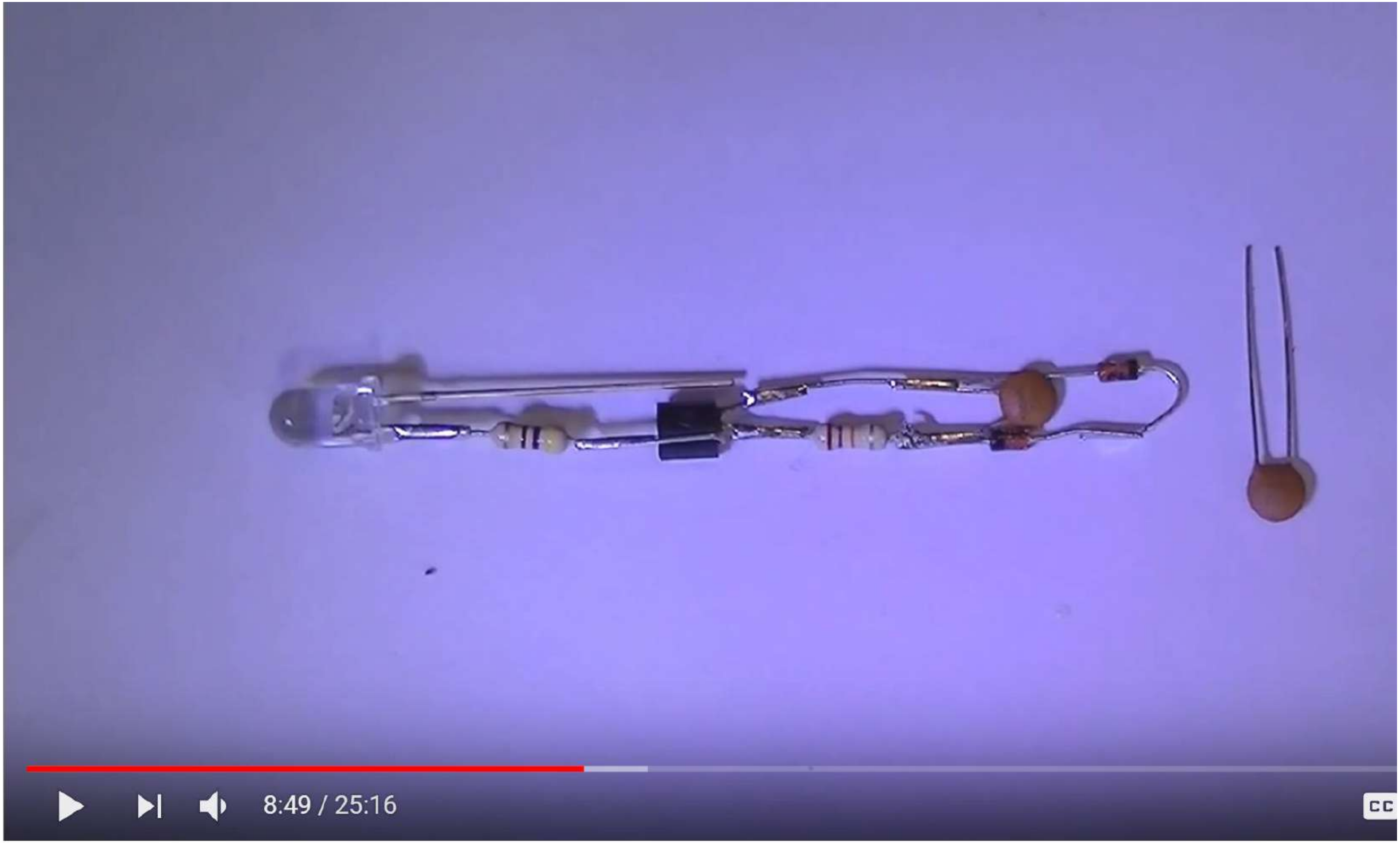

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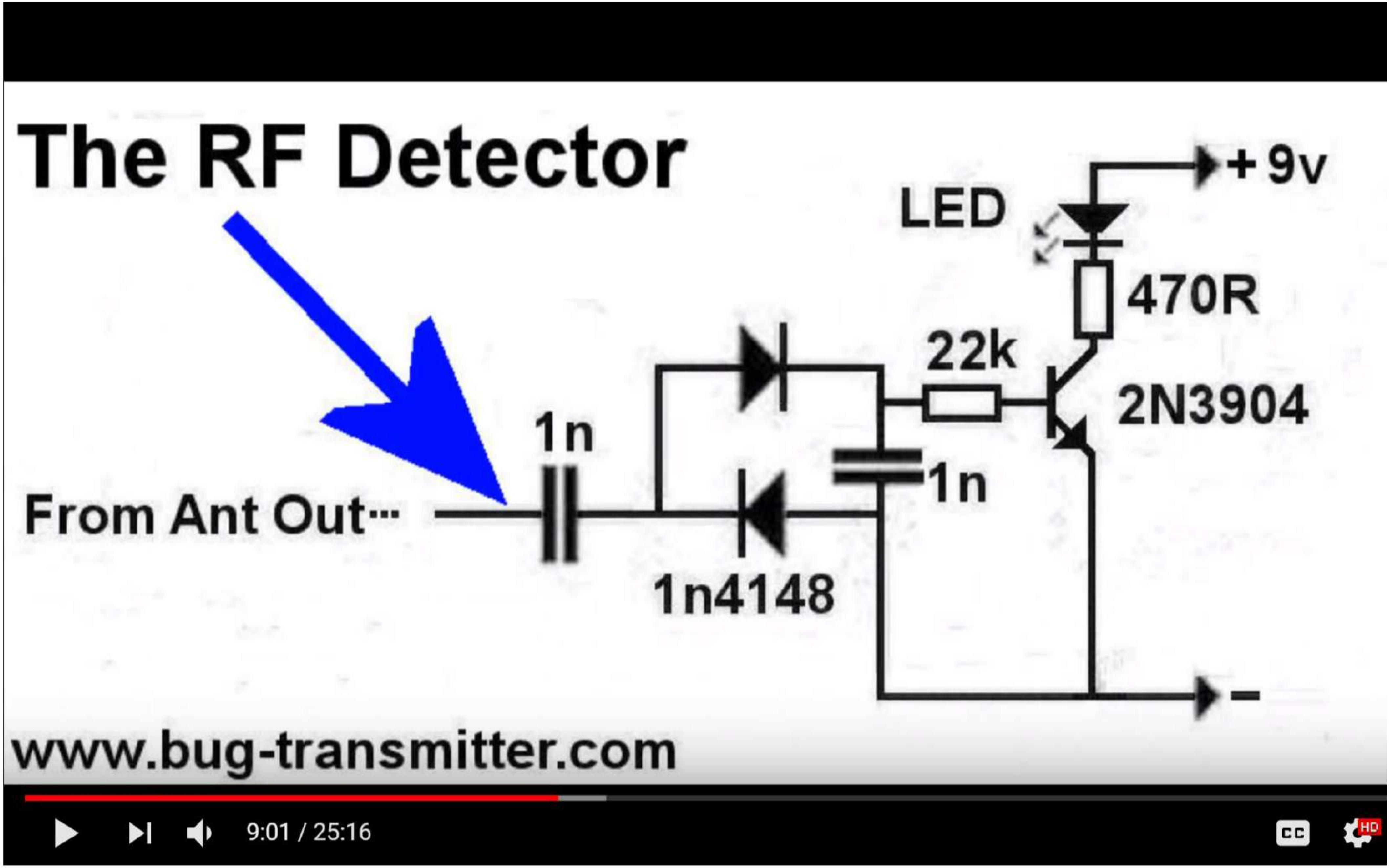
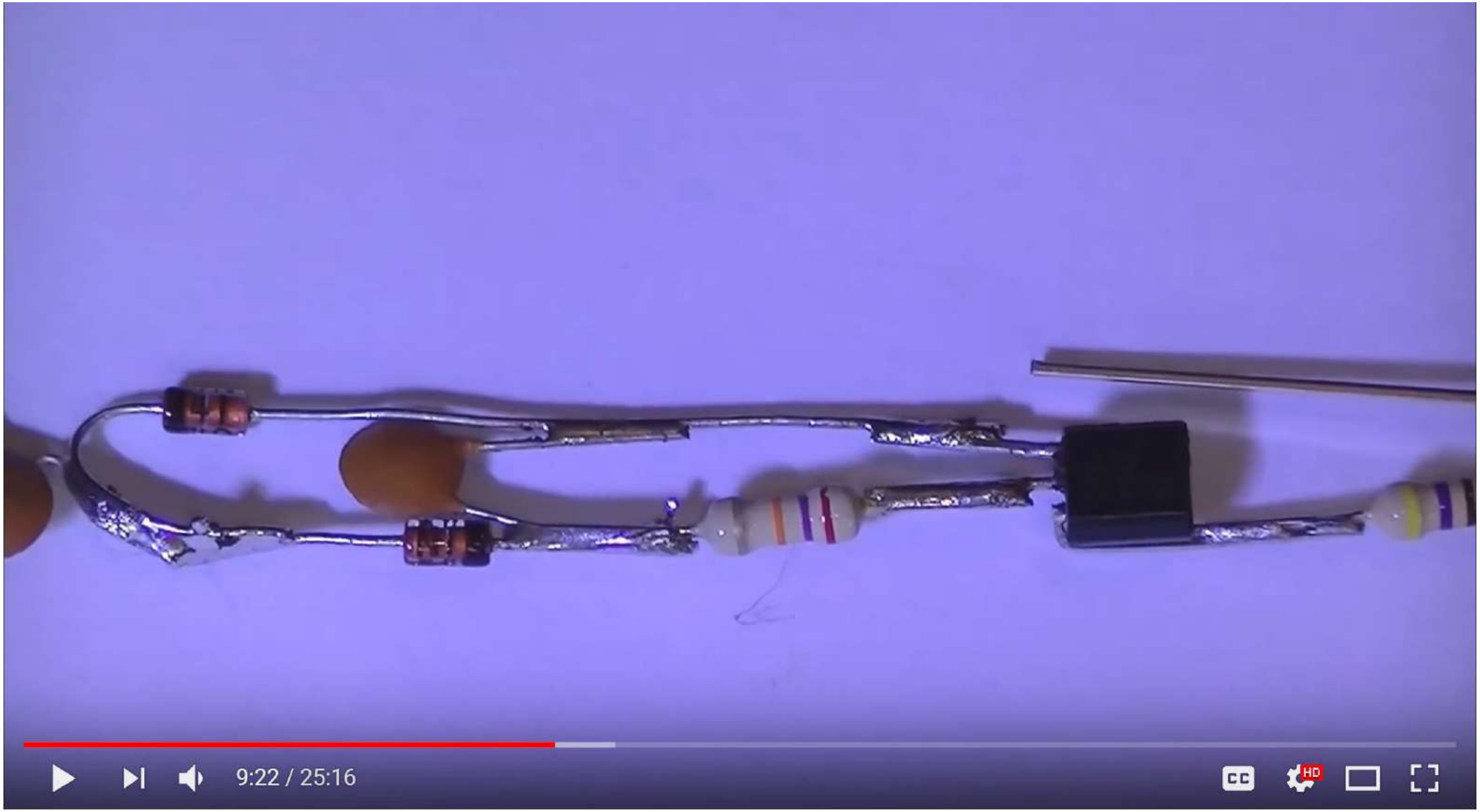


Lets build a RF Pen detector .A good tool for testing small FM transmitters.


9:11 / 25:16
HD



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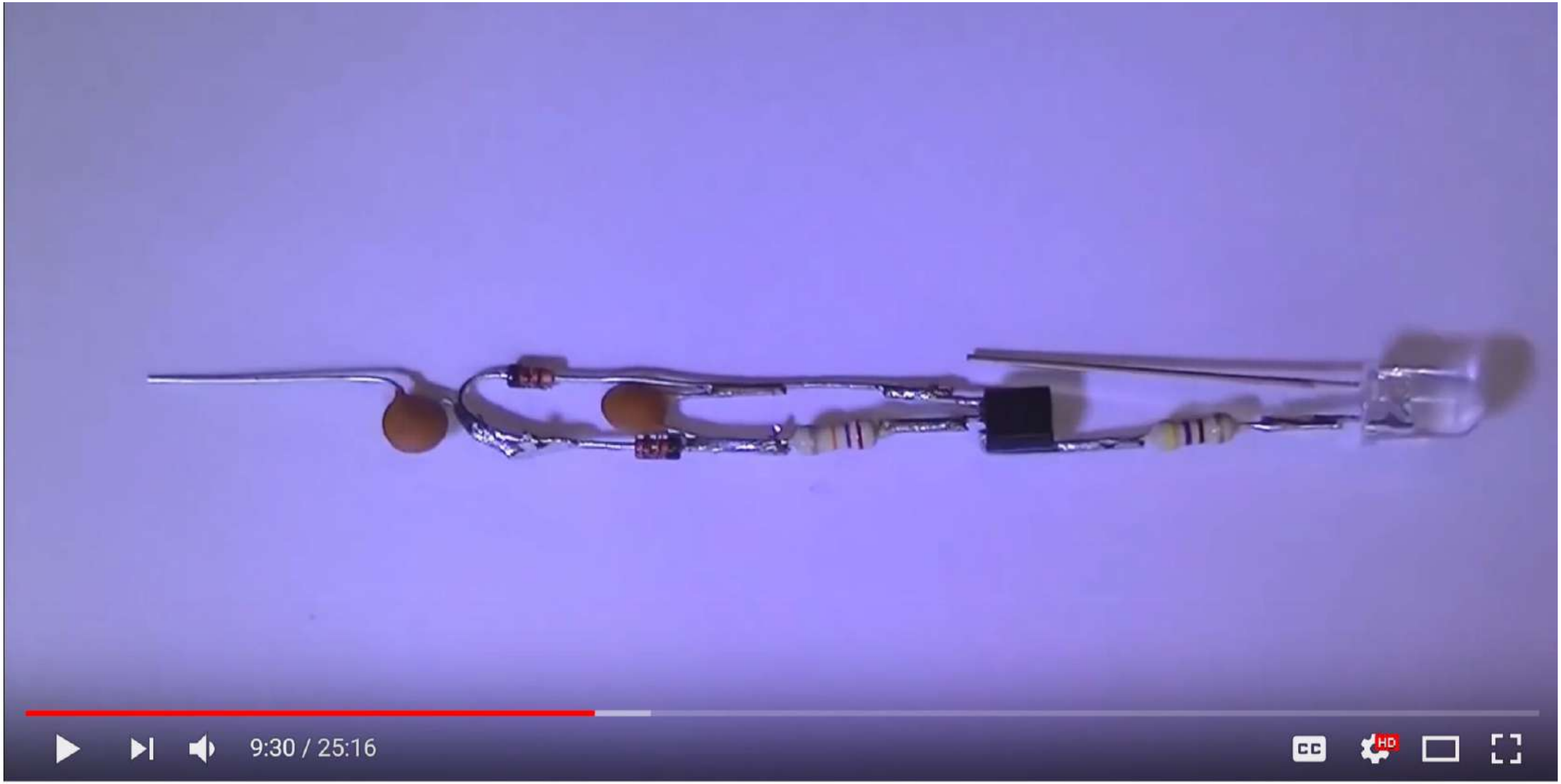
9:30 / 25:16
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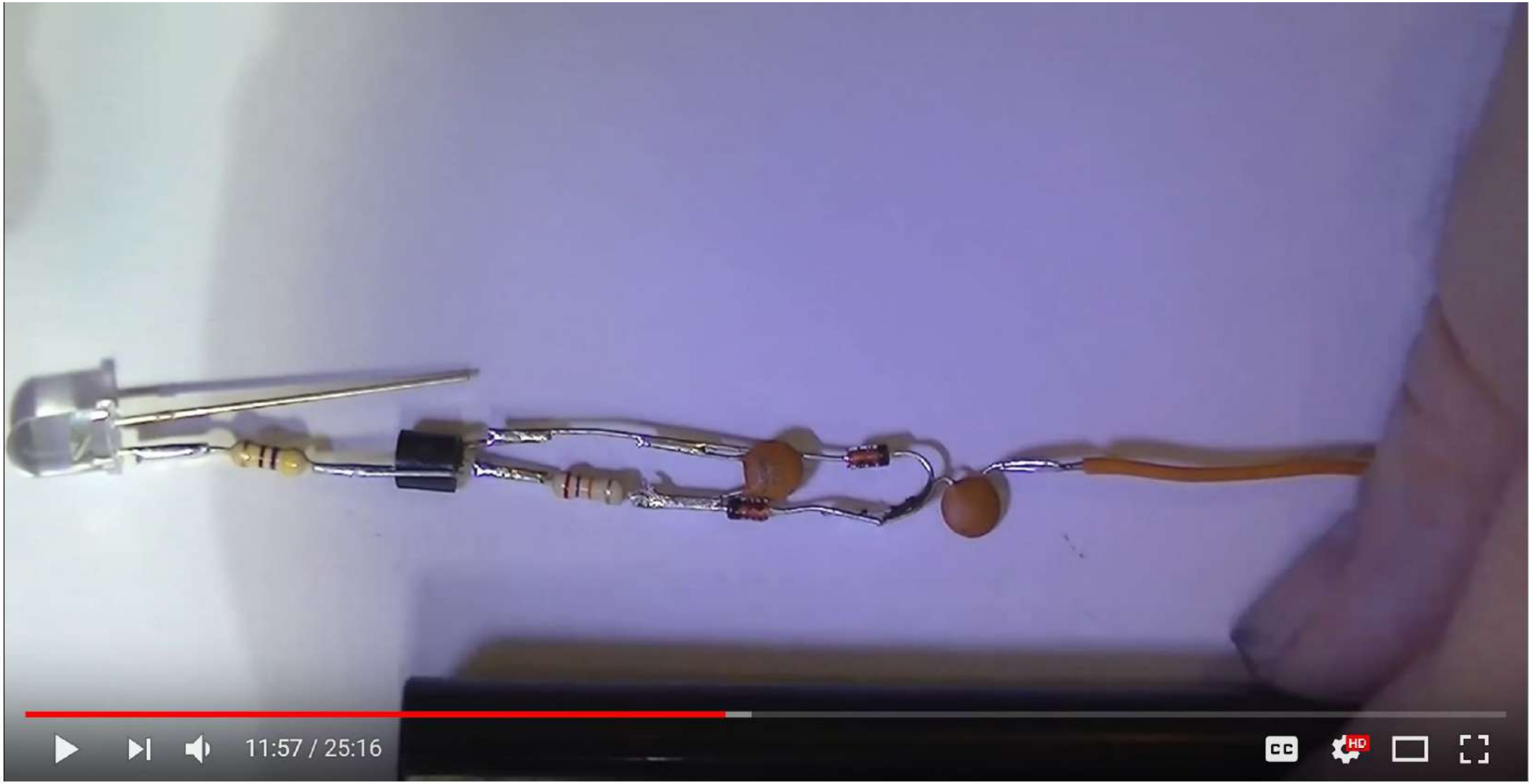
HD



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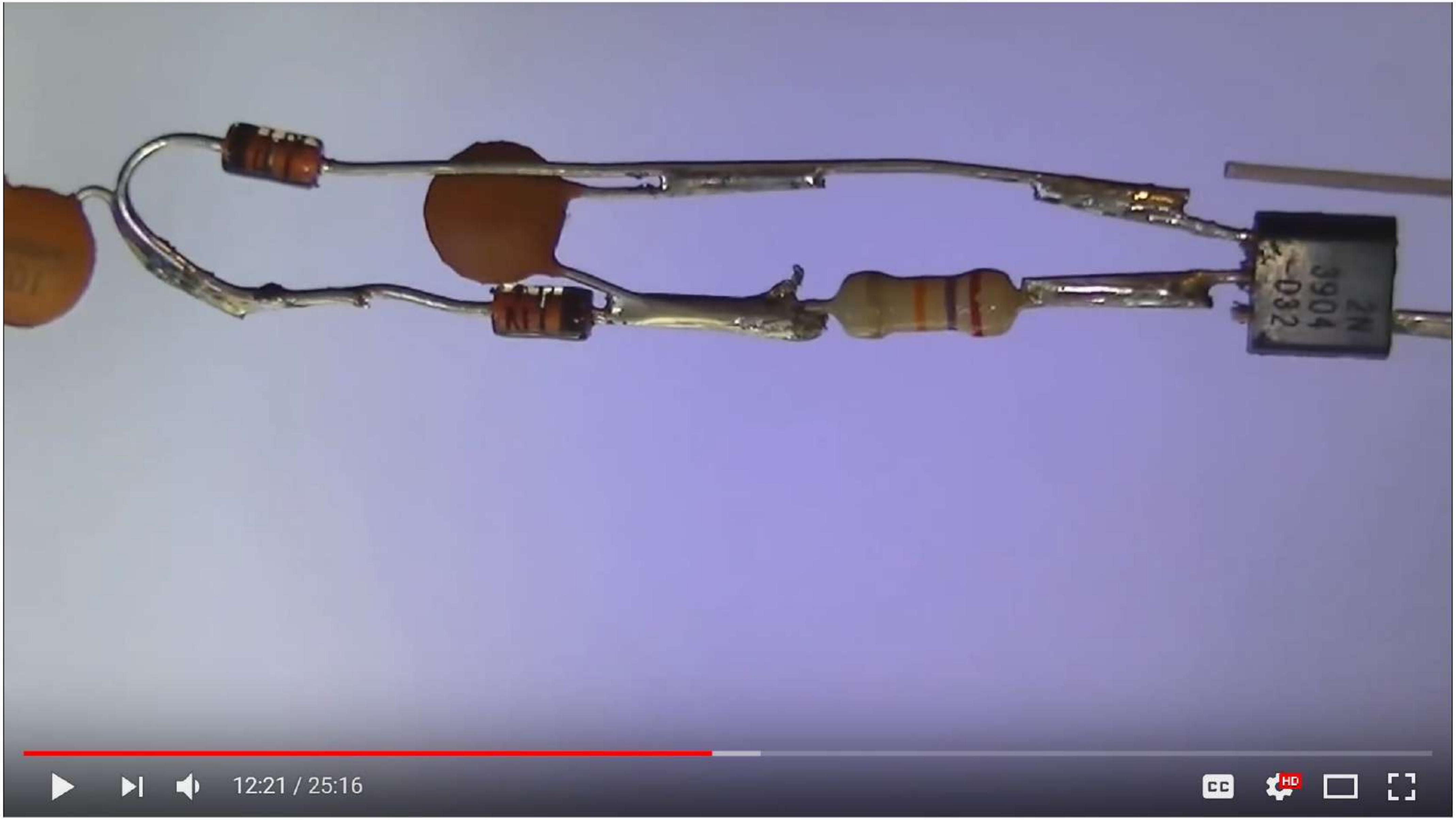

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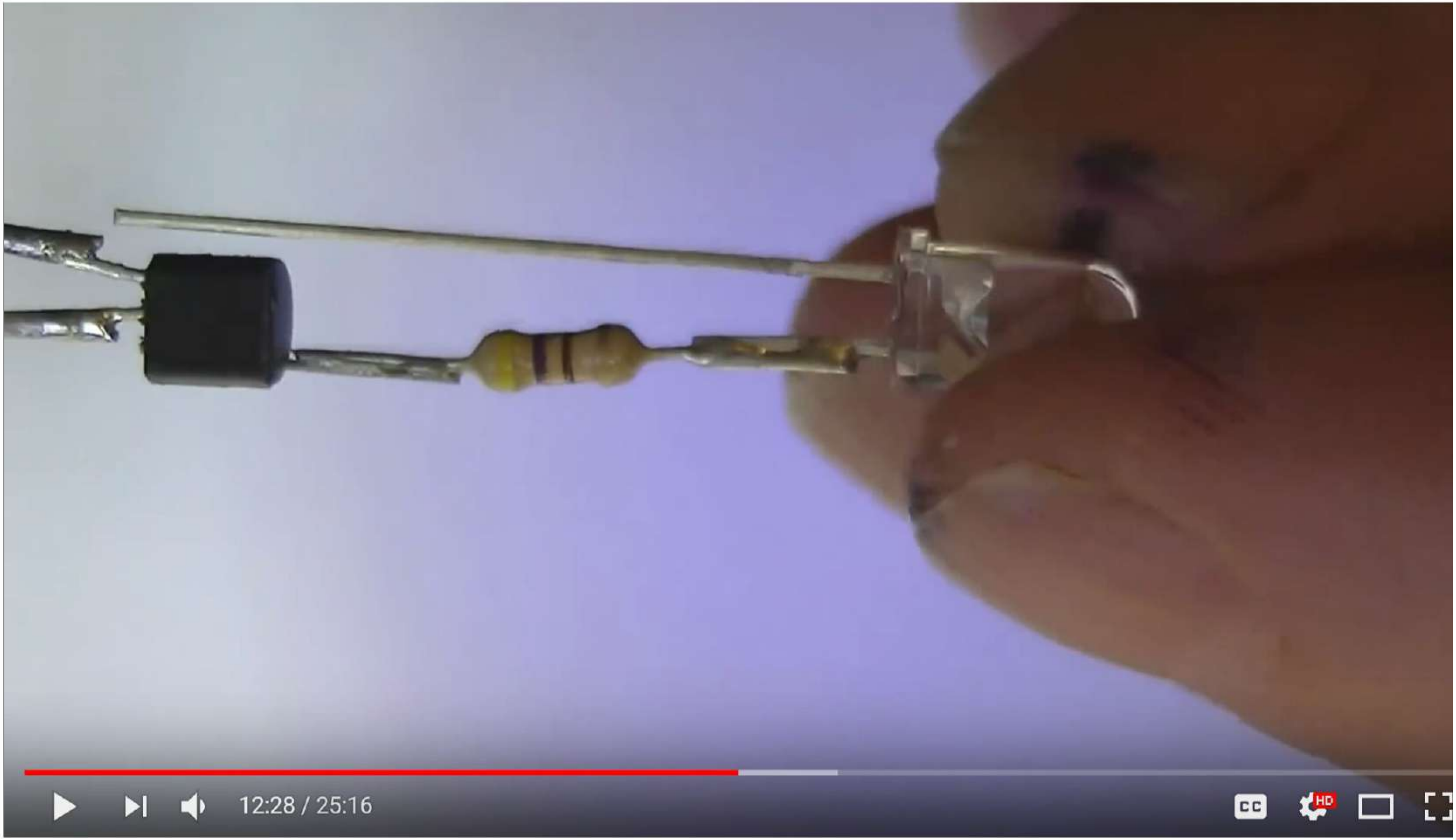

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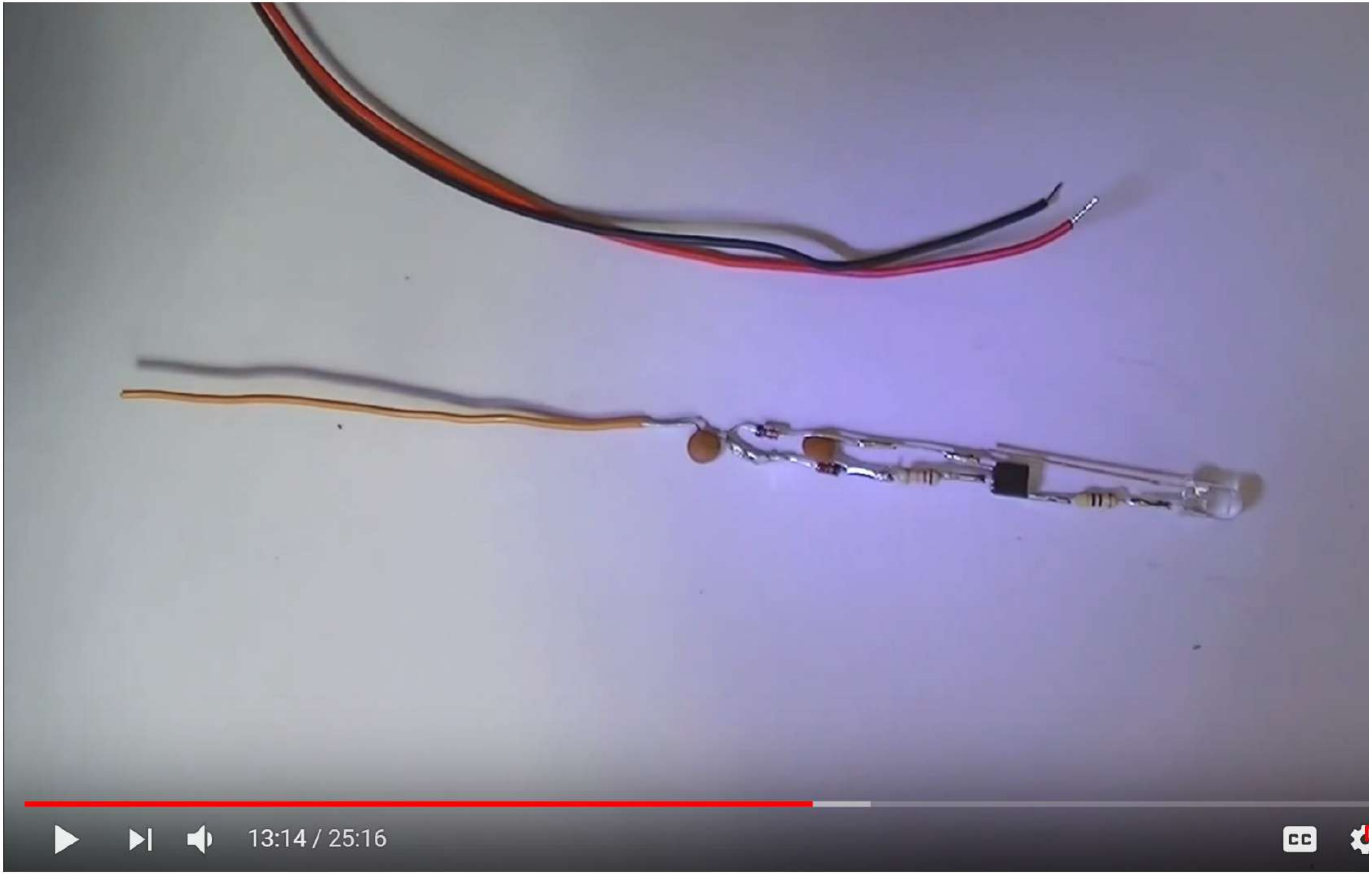

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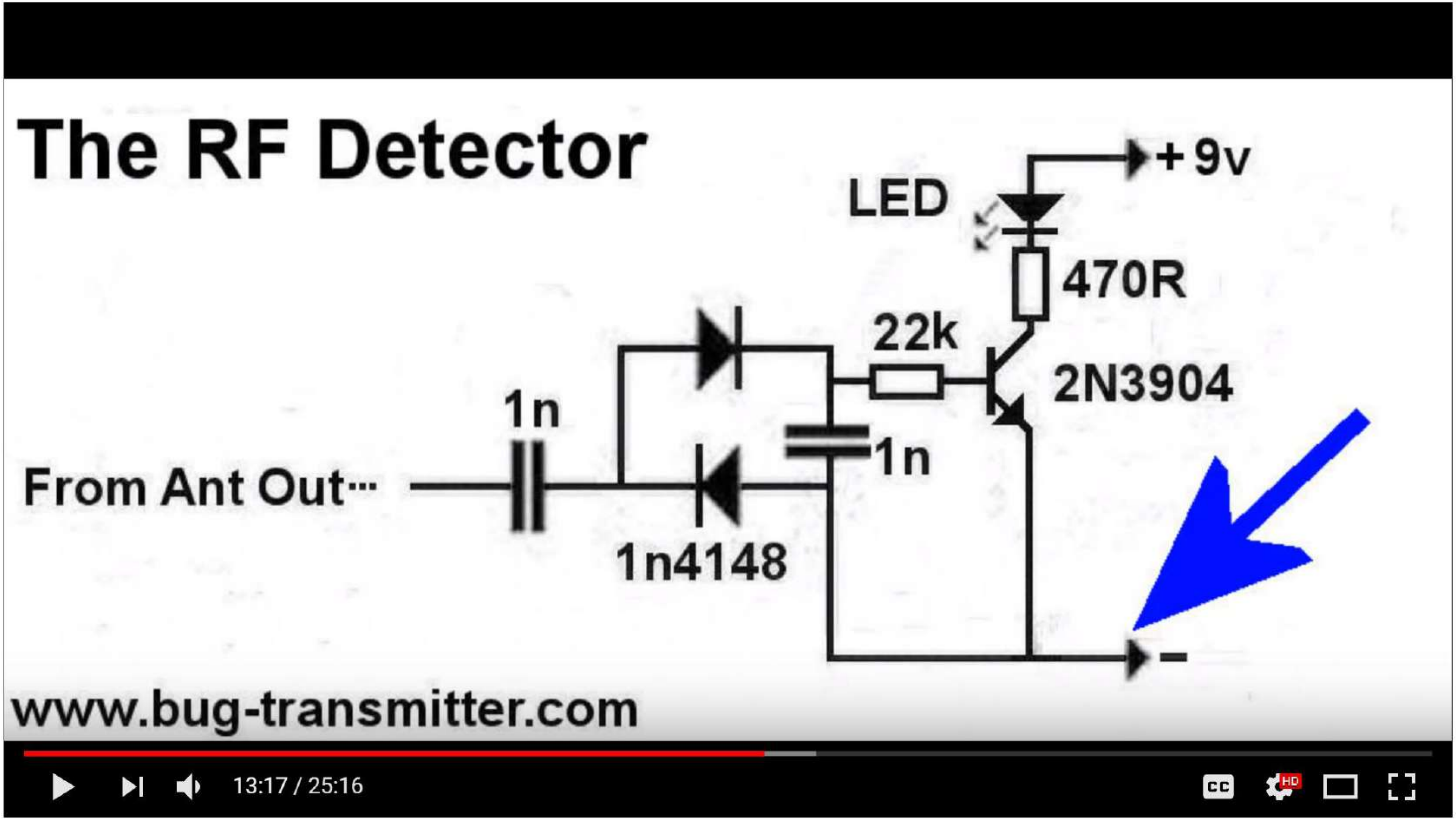
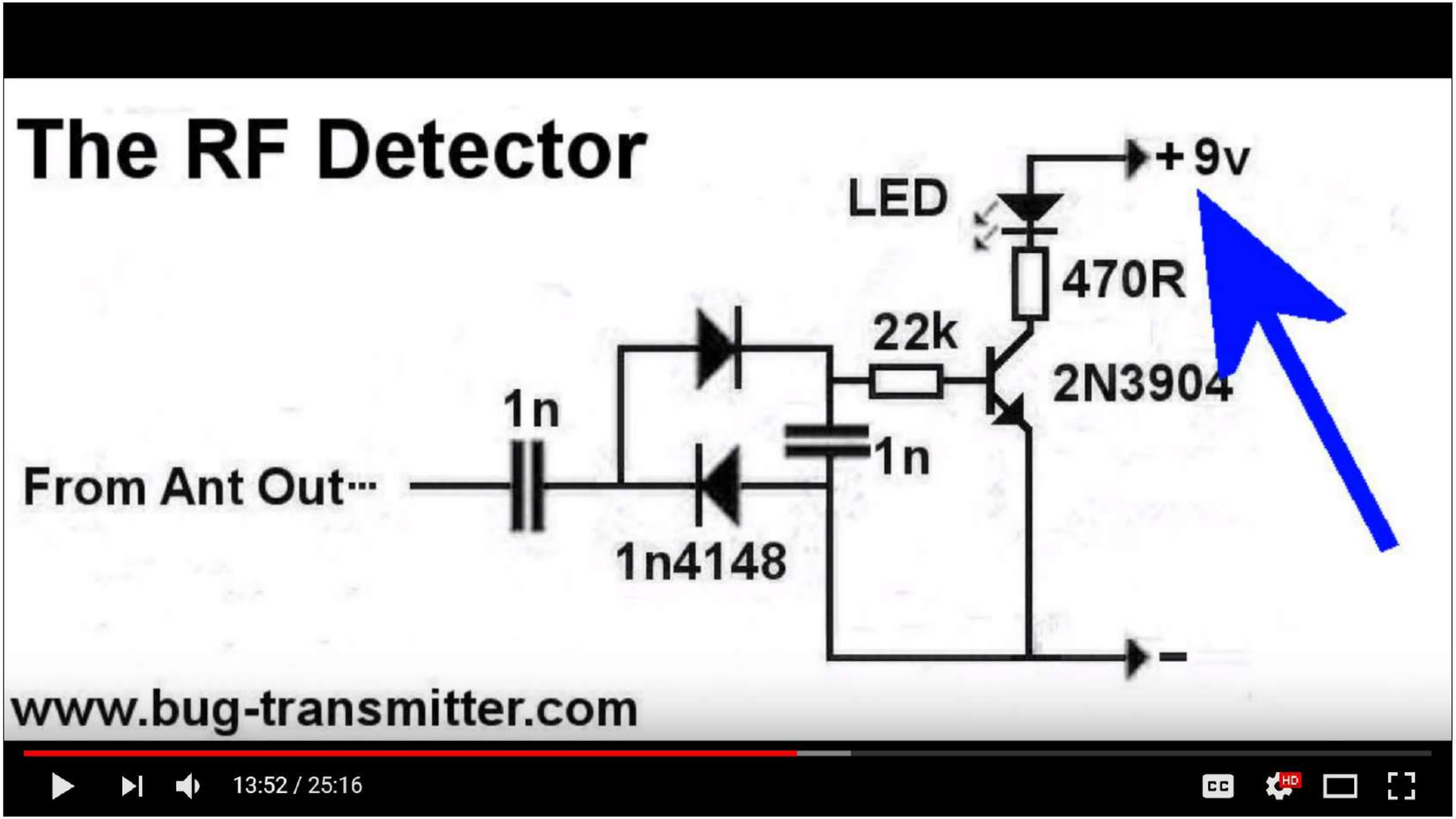

The RF Detector
LED
+ 9v
470R
22k
2N3904
1n
1n
From Ant Out...
1n4148
-
www.bug-transmitter.com
13:17 / 25:16

Lets build a RF Pen detector .A good tool for testing small FM transmitters.


The RF Detector
LED
+ 9v
470R
22k
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1n
1n
From Ant Out
1n4148
-
www.bug-transmitter.com
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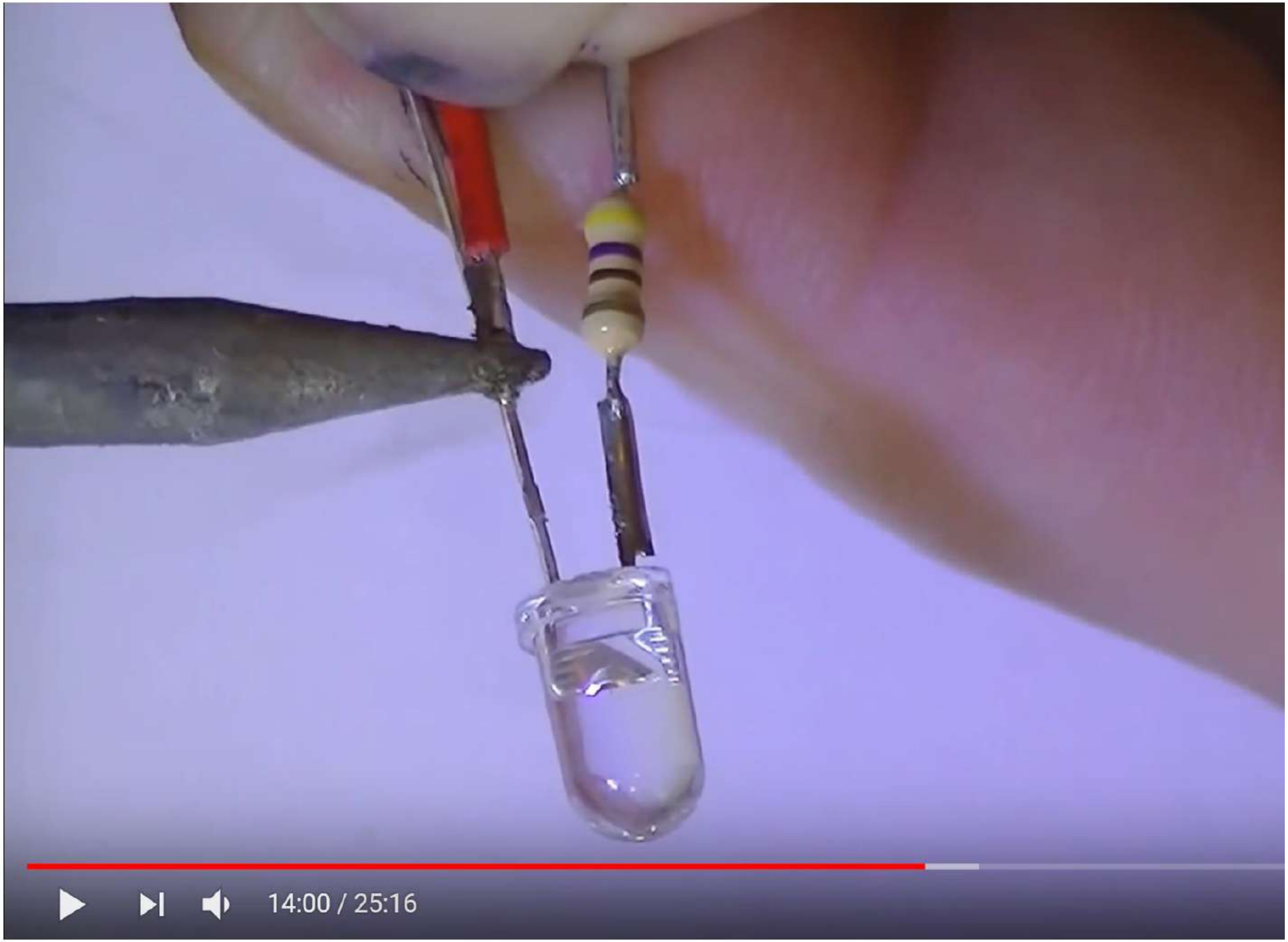
HD



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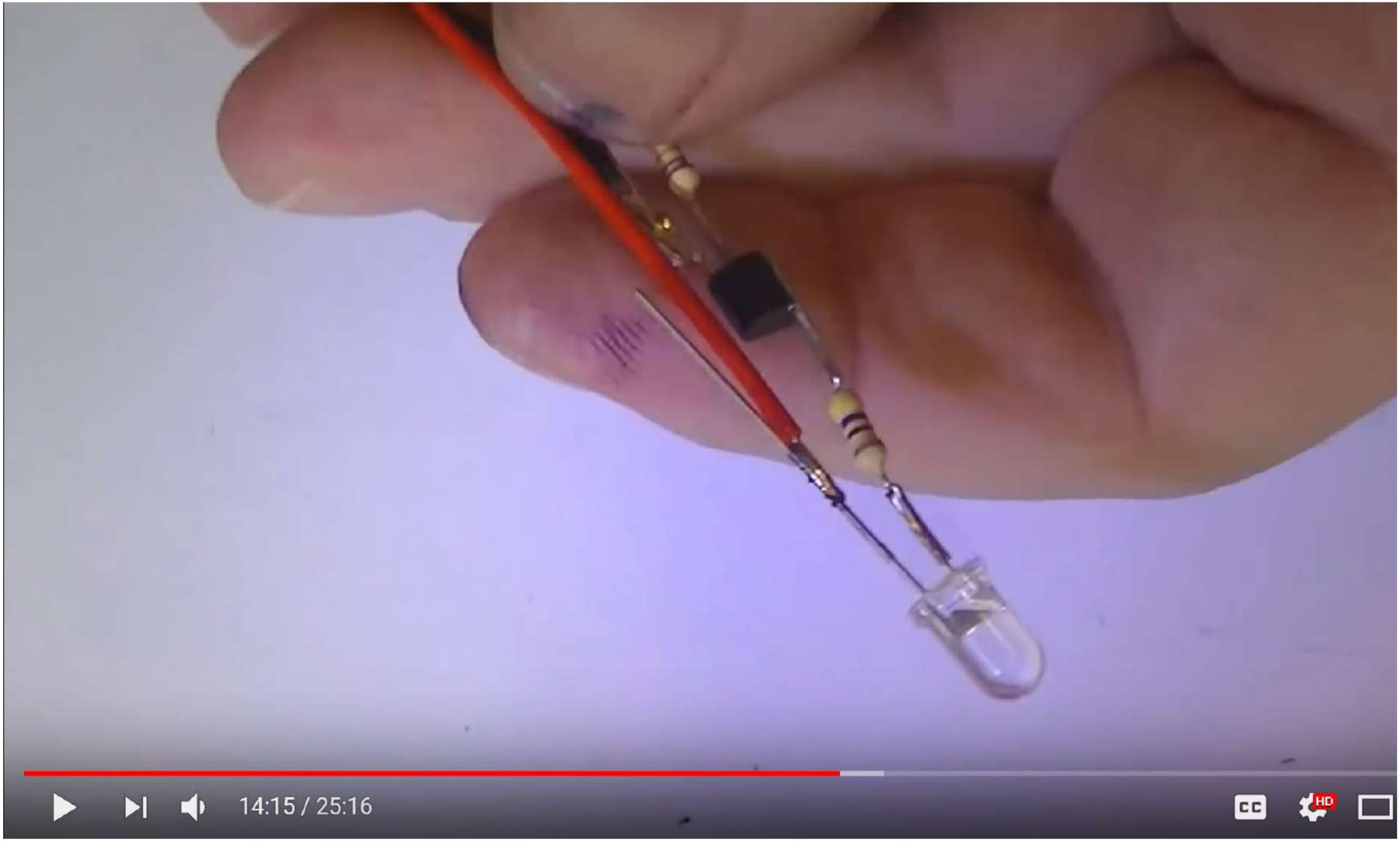

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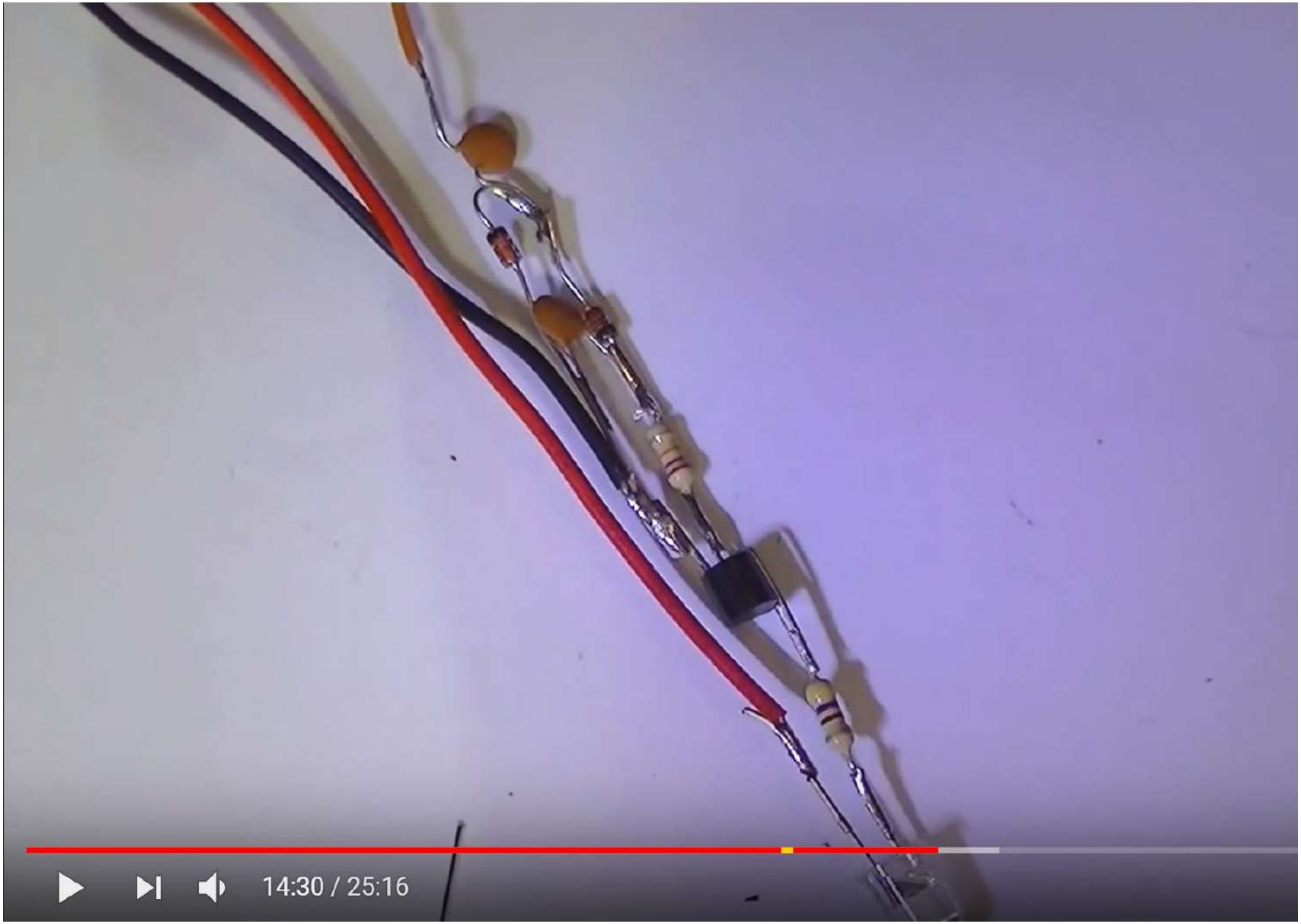

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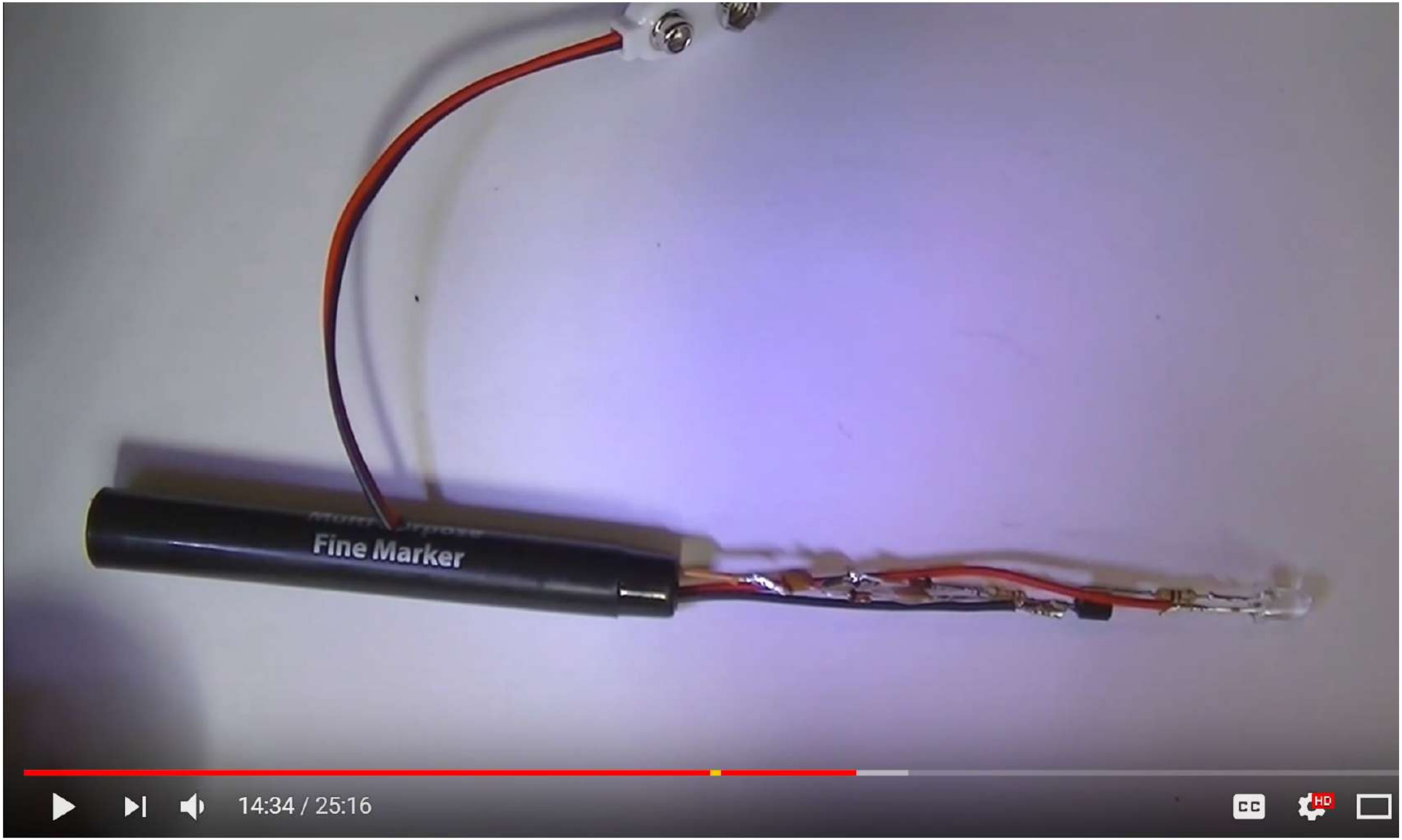

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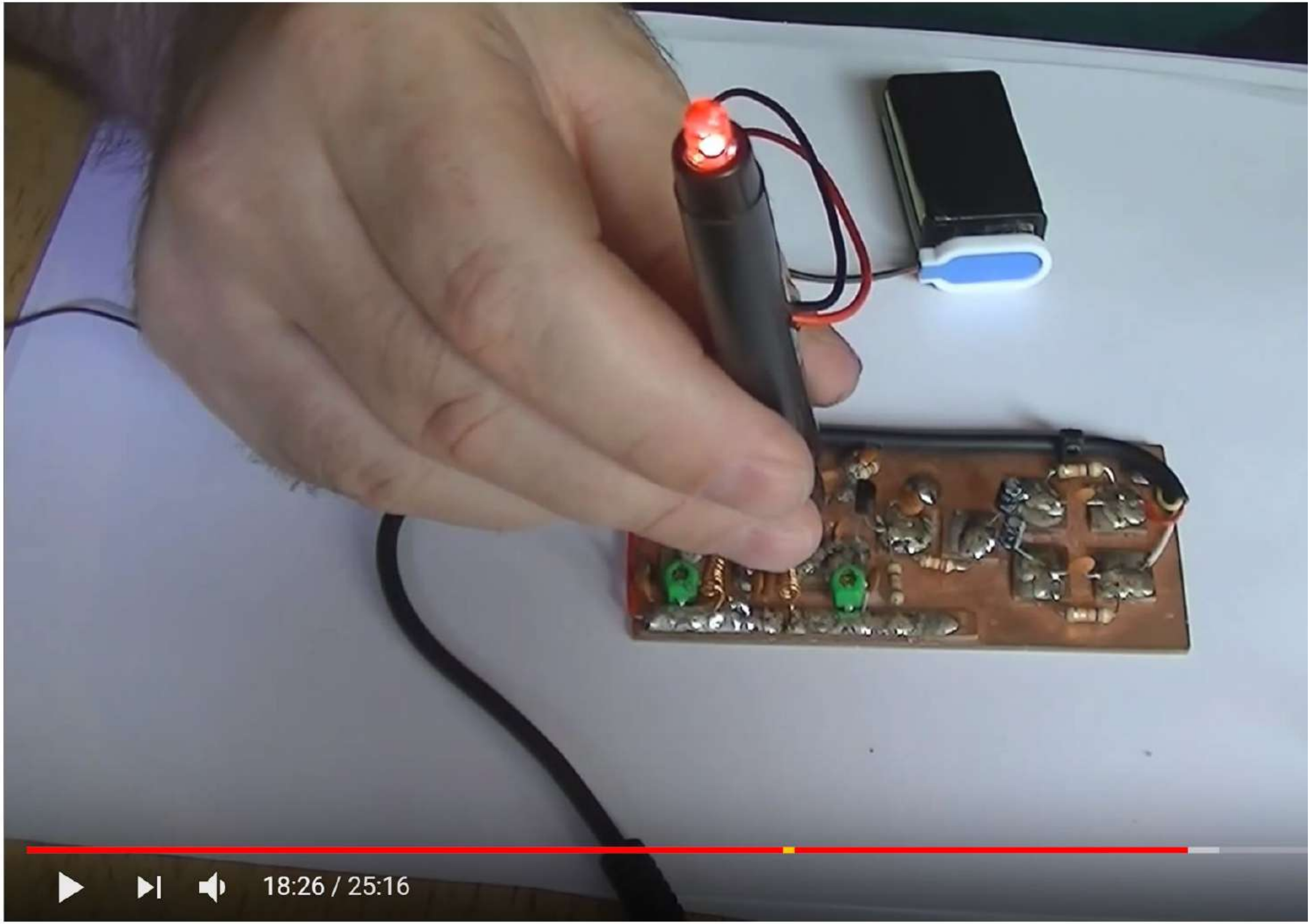

Lets build a RF Pen detector .A good tool for testing small FM transmitters.

Lets build a RF Pen detector .A good tool for testing small FM transmitters.


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5:30 / 15:40
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Survival Camping: #1 Turn Seawater into Fresh Water with Trash
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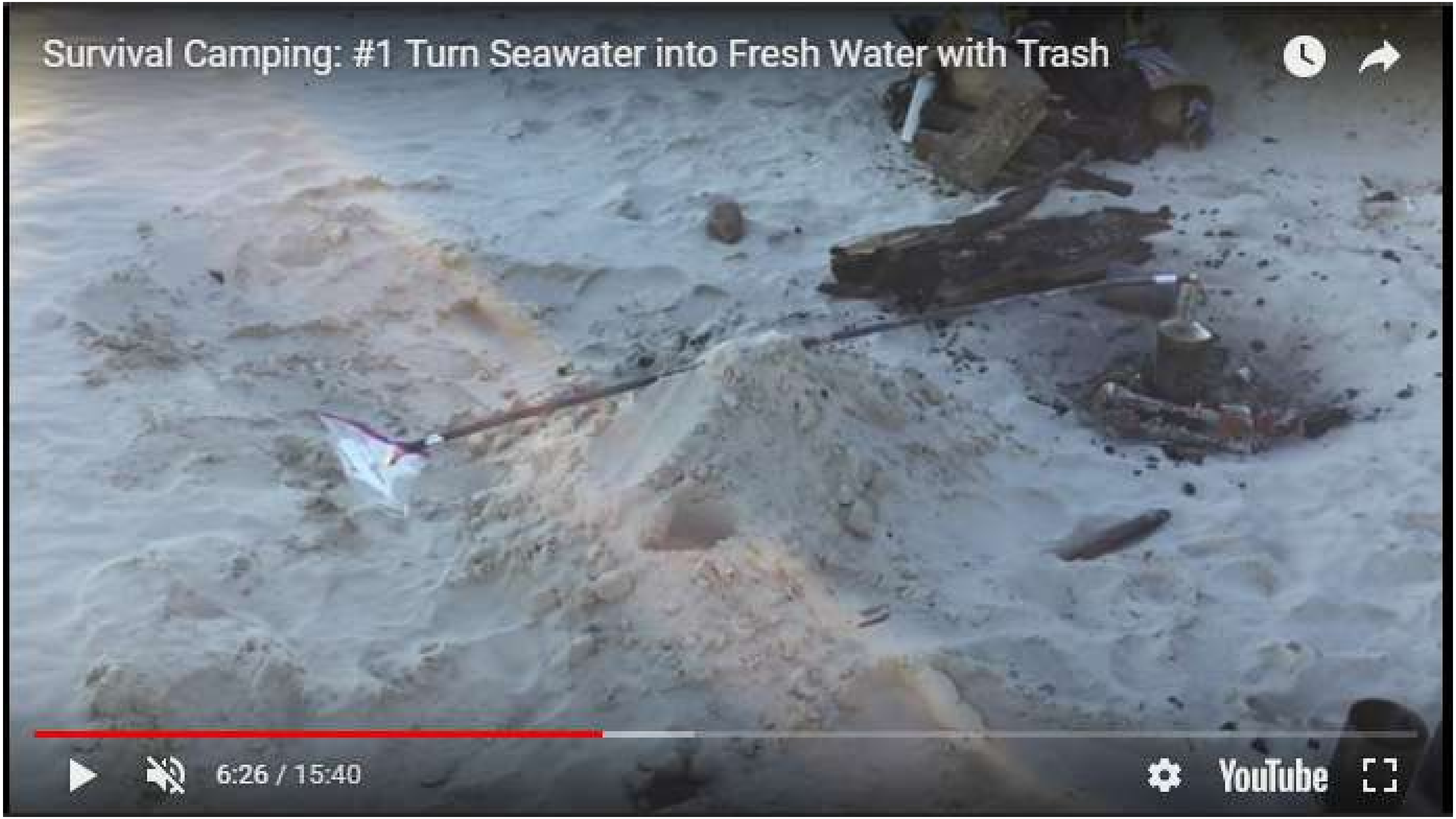
YouTube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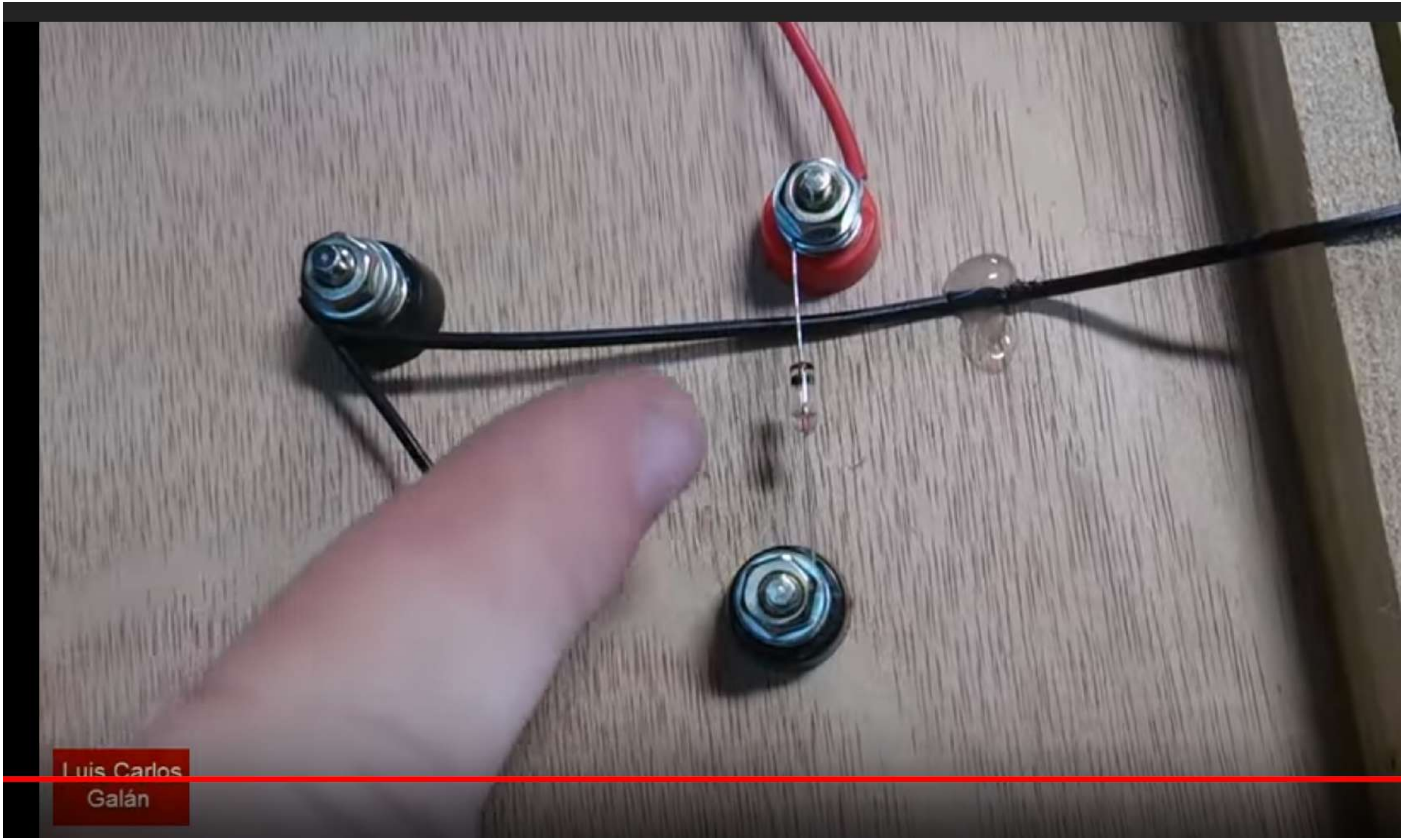
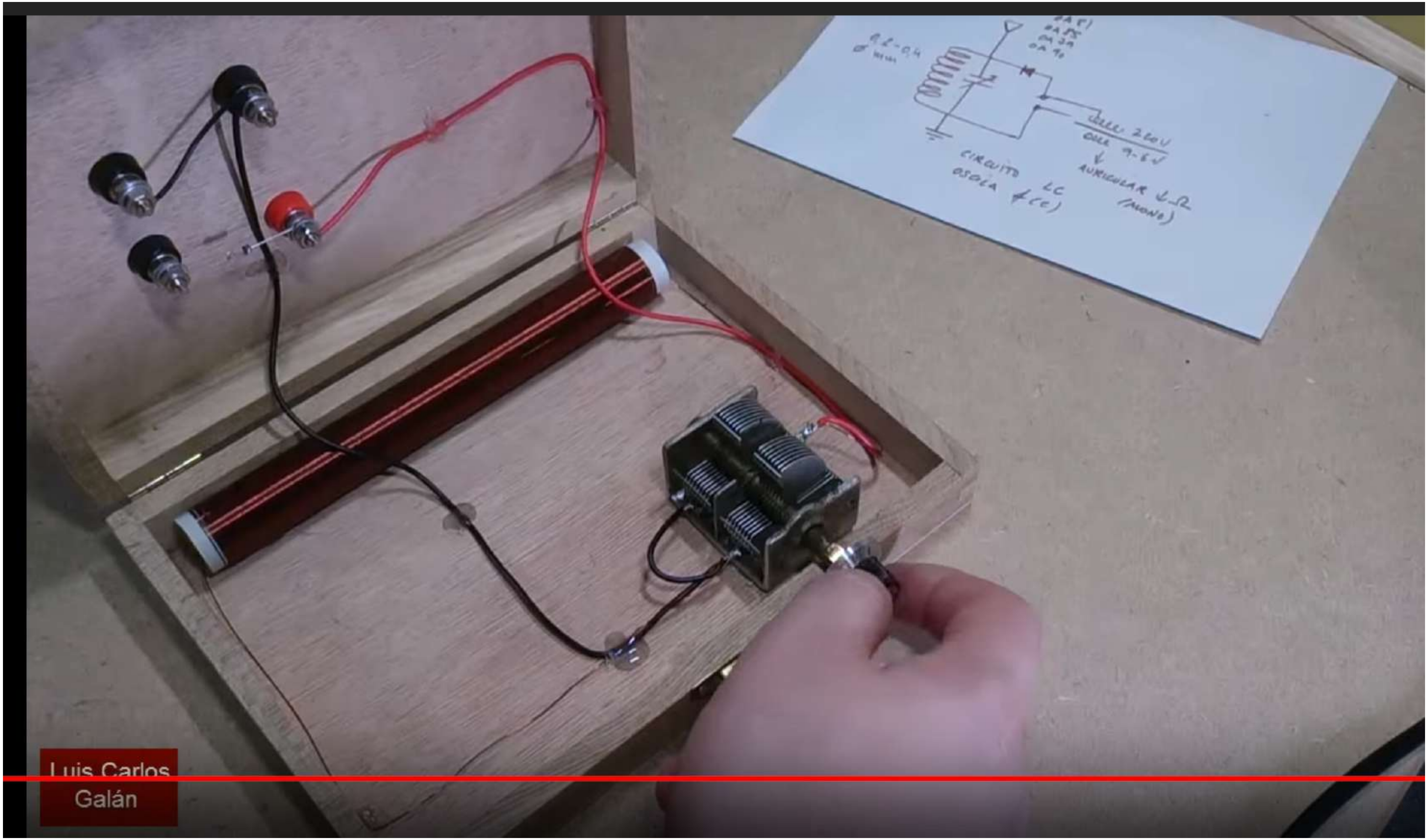

Luis Carlos
Galán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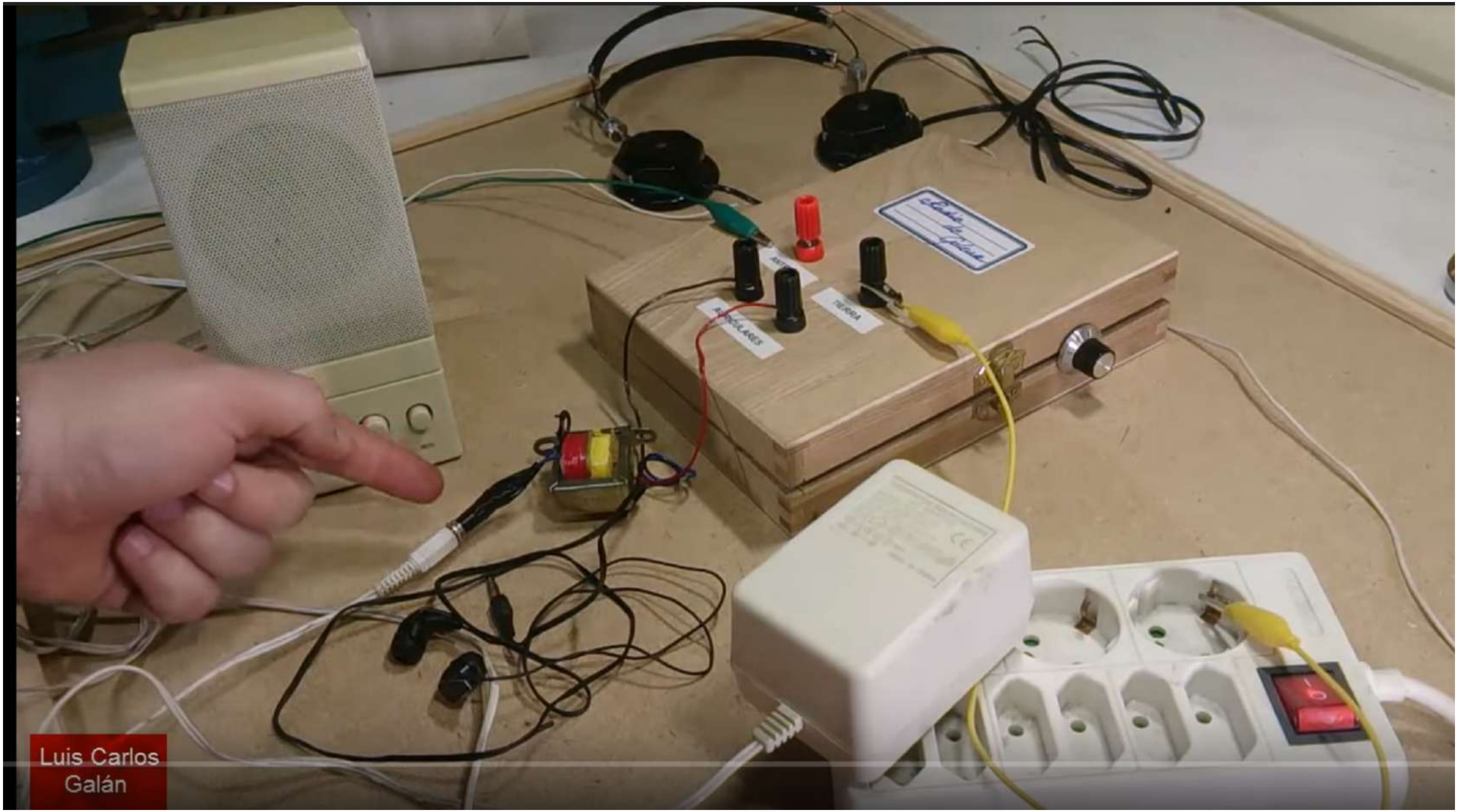
Galán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Luis Carlos
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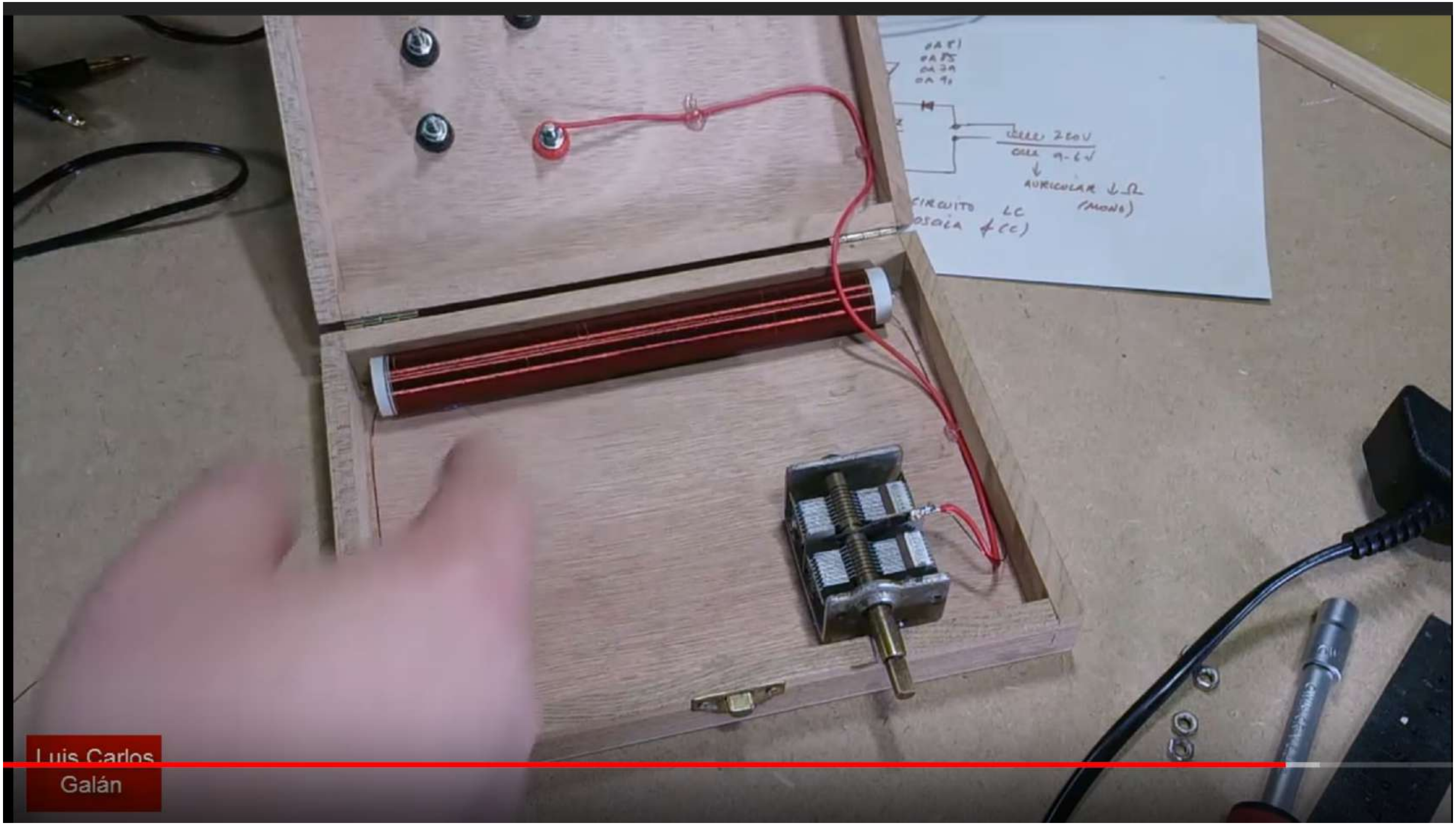
Luis Carlos
Galán
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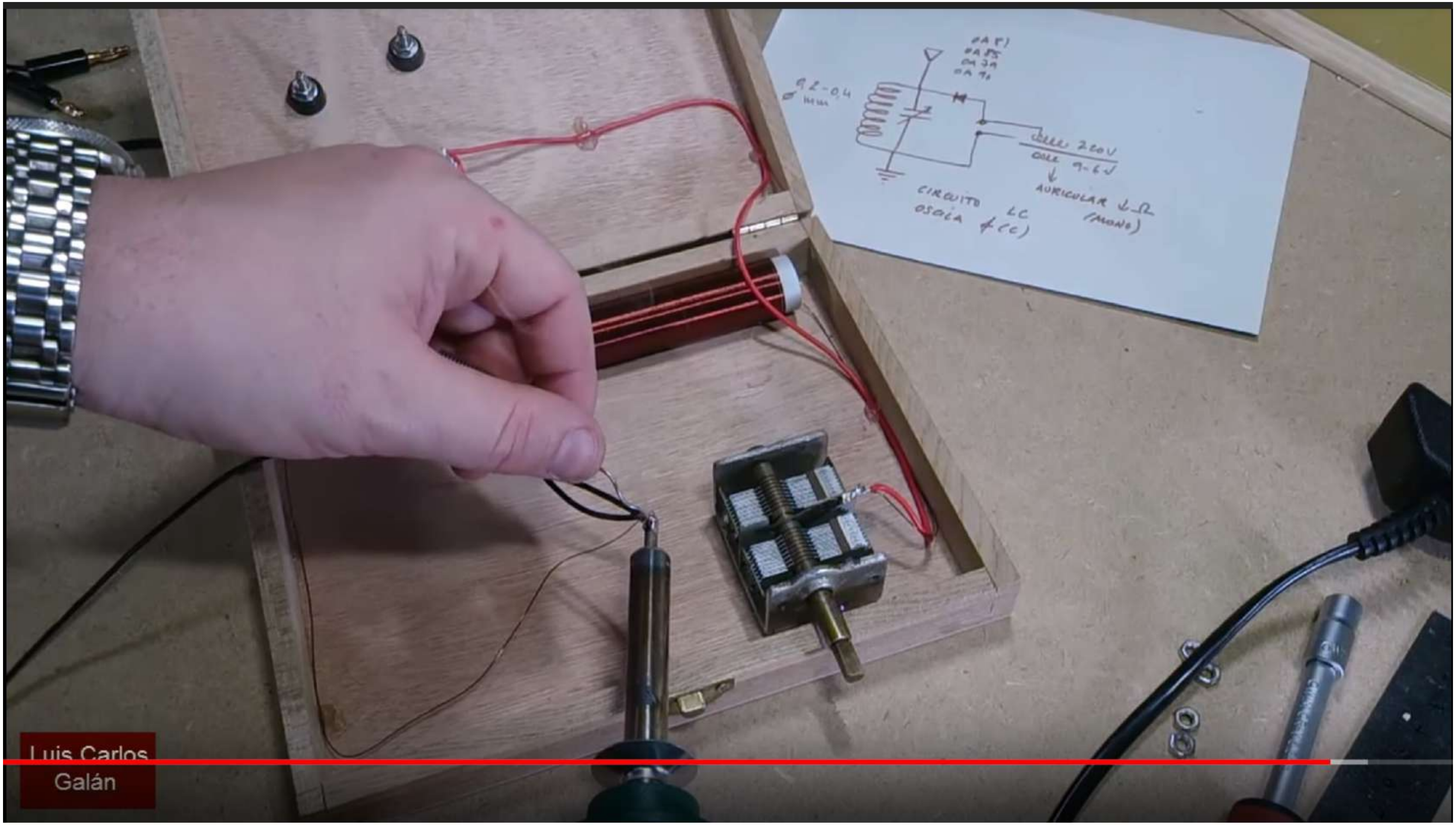
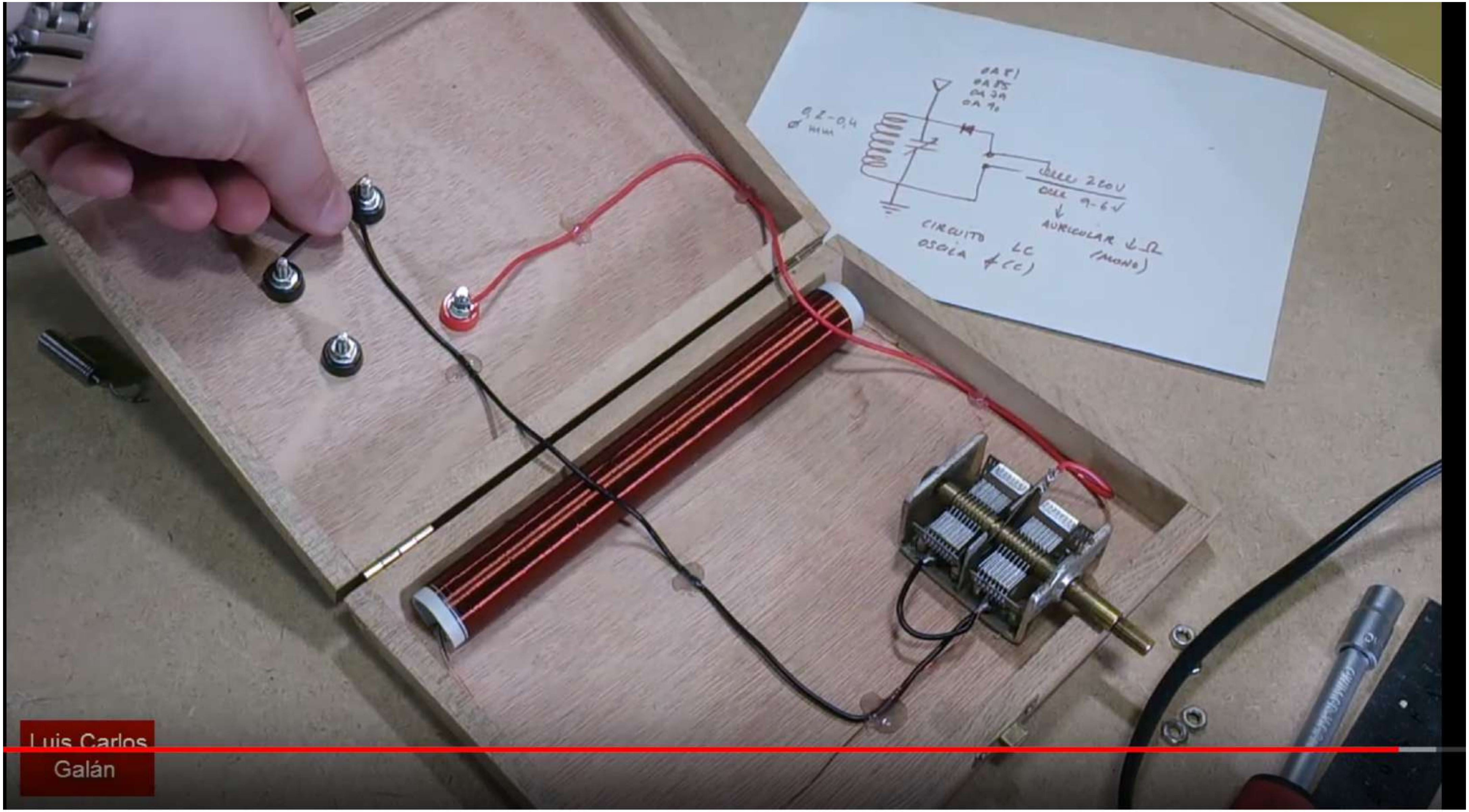
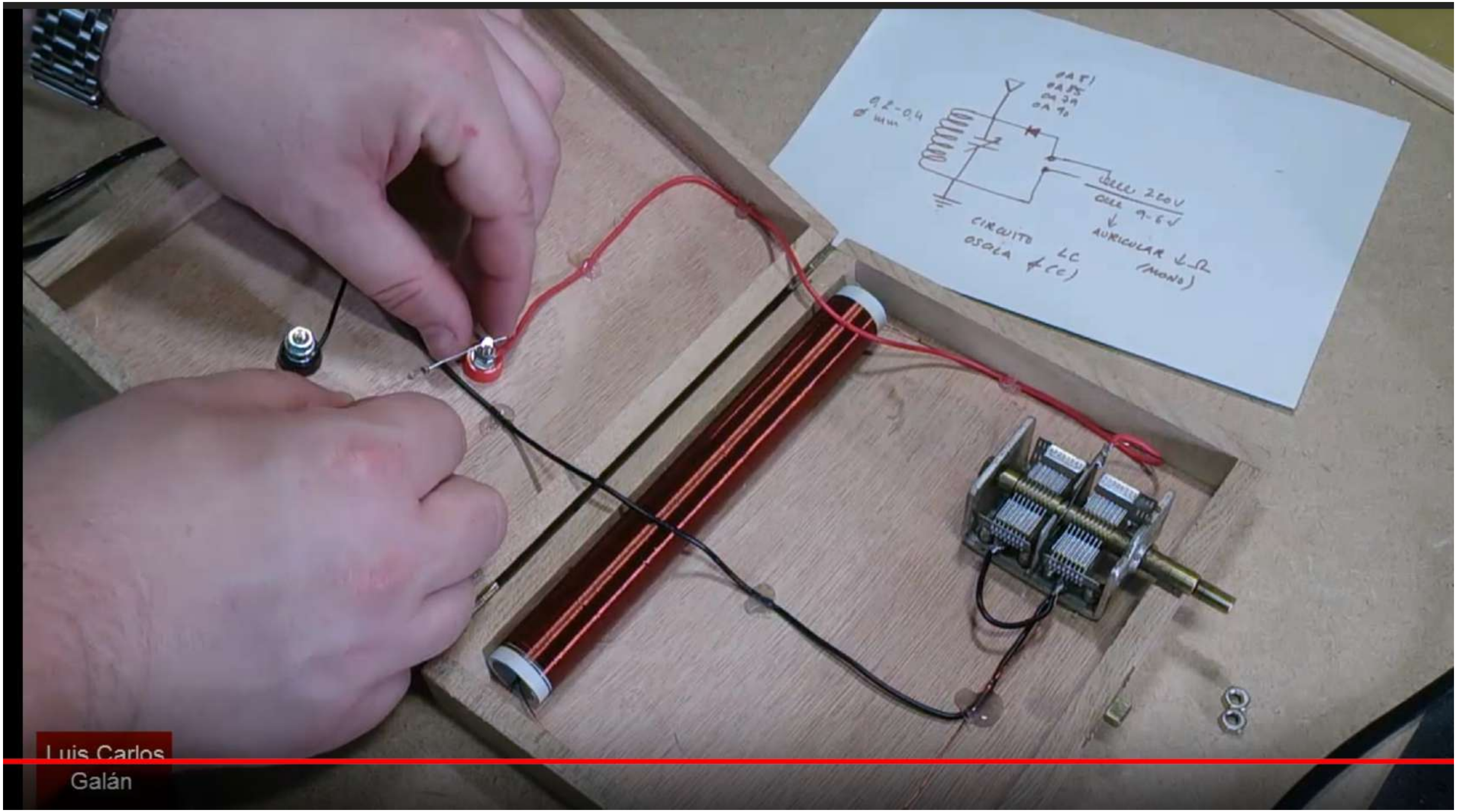
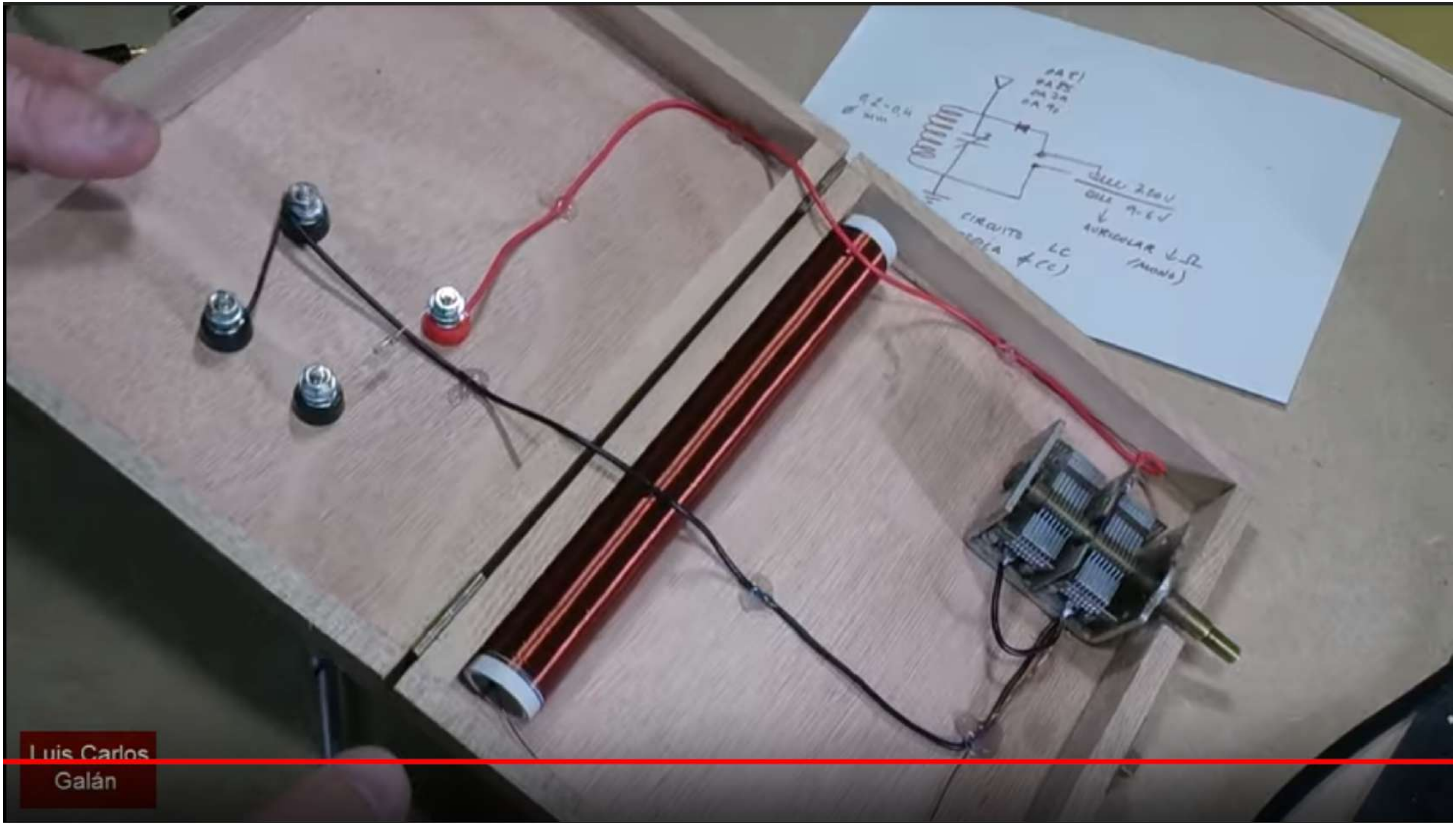
(MONO)
LC

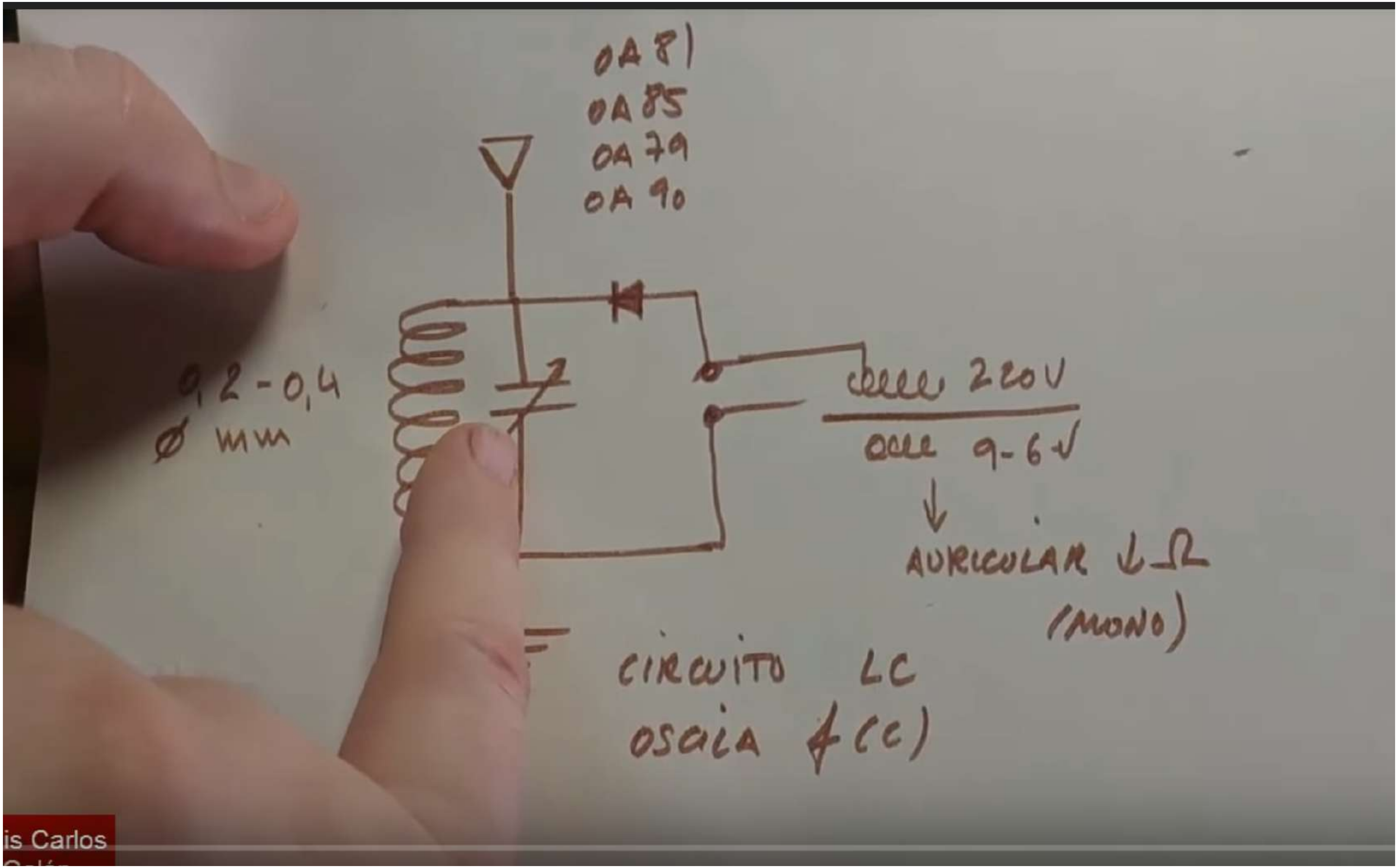

220V
AURICULAR
(MONO)
CIRCUITO LC
Luis Carlos Galán

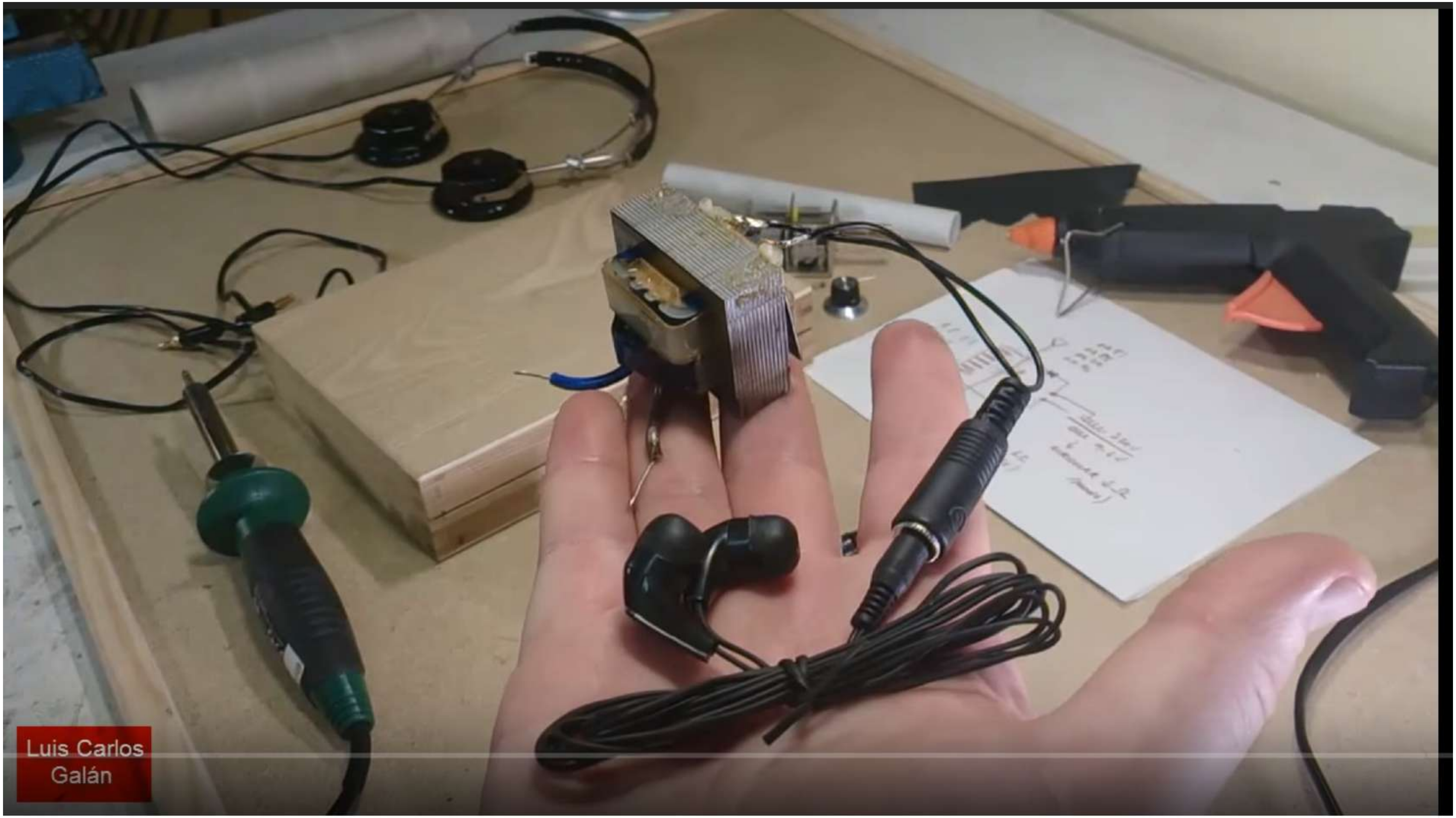

OA 81
OA 85
0,2-0,4
mm
220V
9-6V
CIRCUITO
OSCILA
LC
AURICULAR
(MONO)
Luis Carlos
Galán

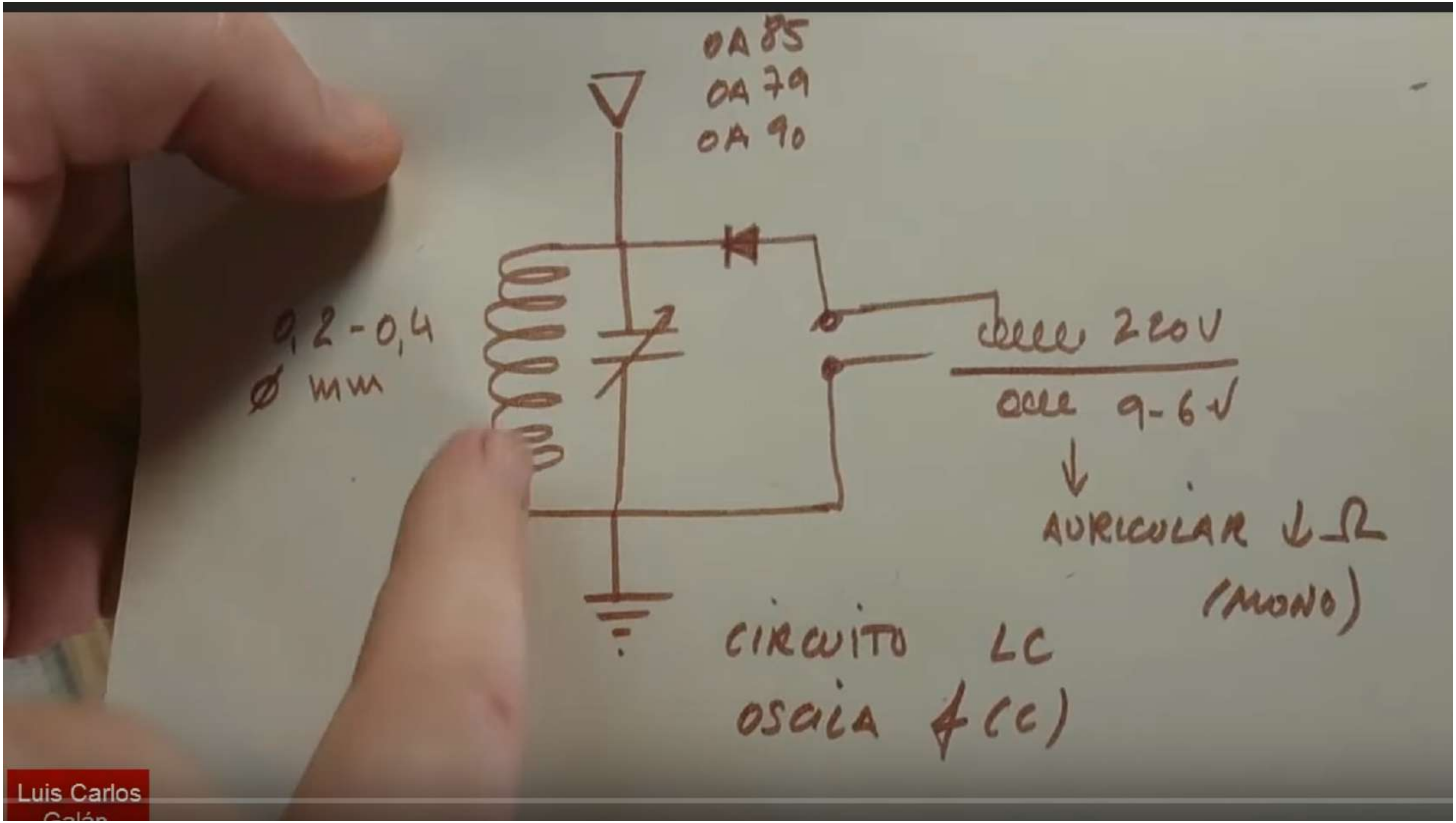


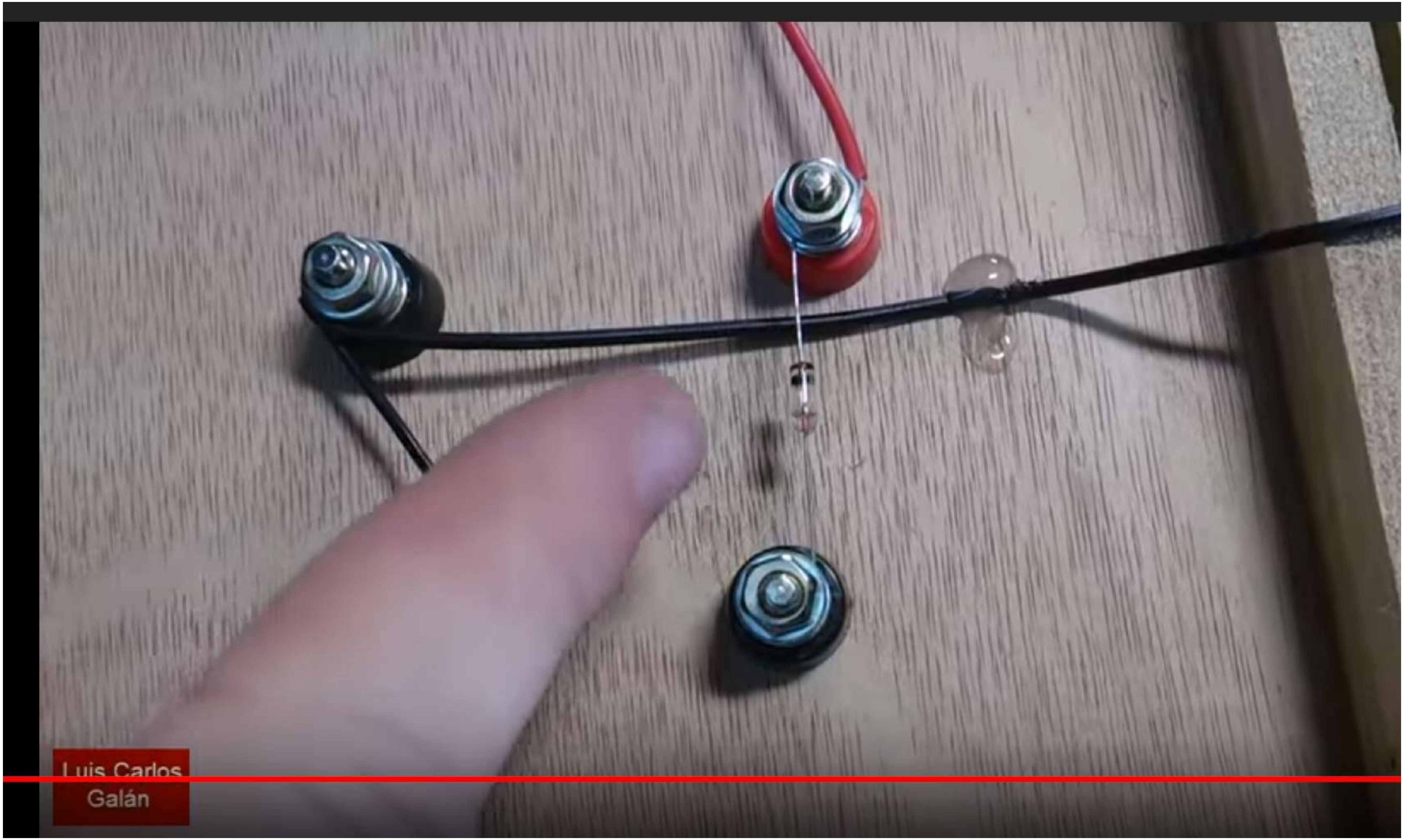
OA 81
OA 85
OA 79
OA 90
0,2-0,4
mm
220V
9-6V
AURICULAR
(MONO)
CIRCUITO
OSCILA
LC
(C)
Luis Carlos
Galán

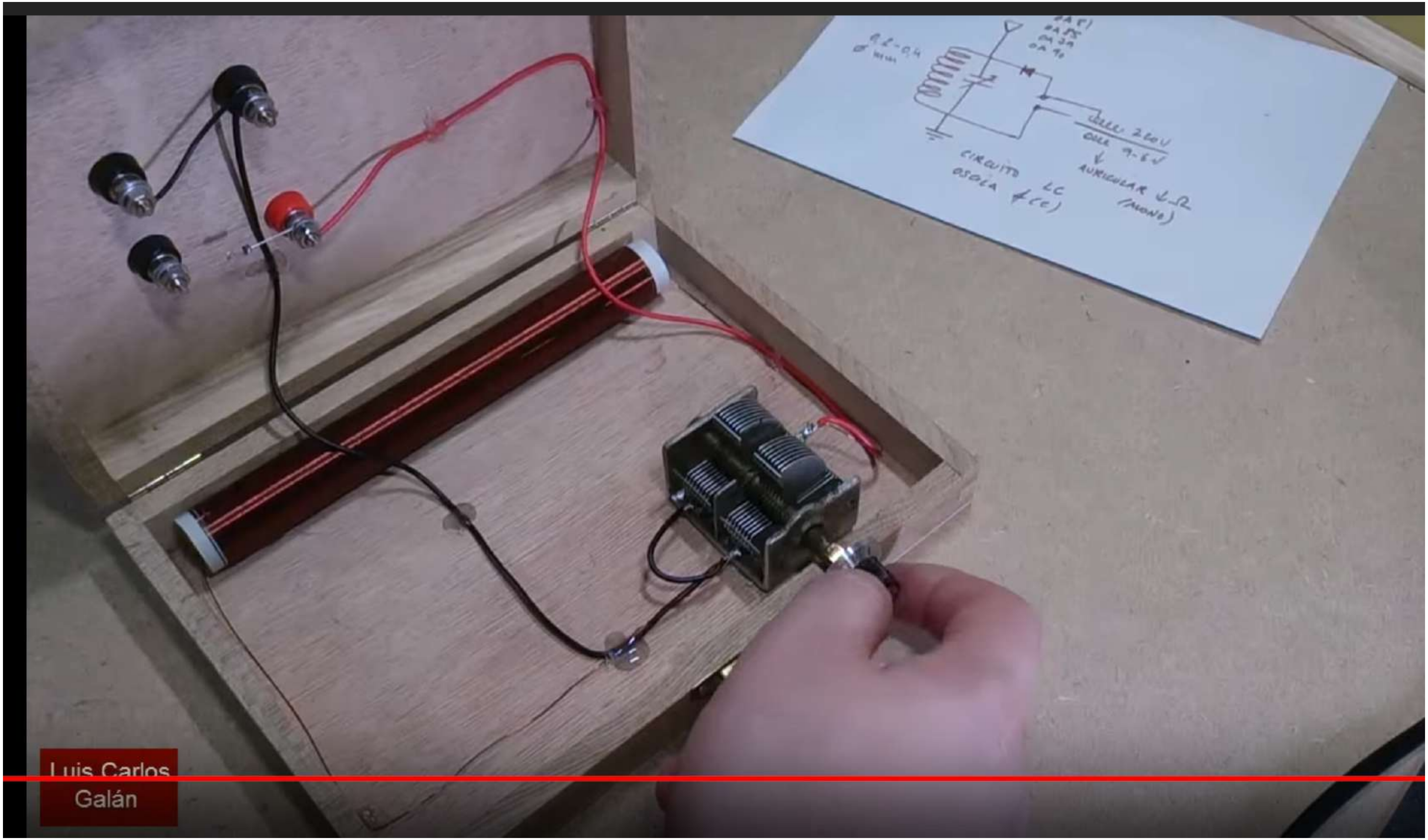

Luis Carlos
Galán

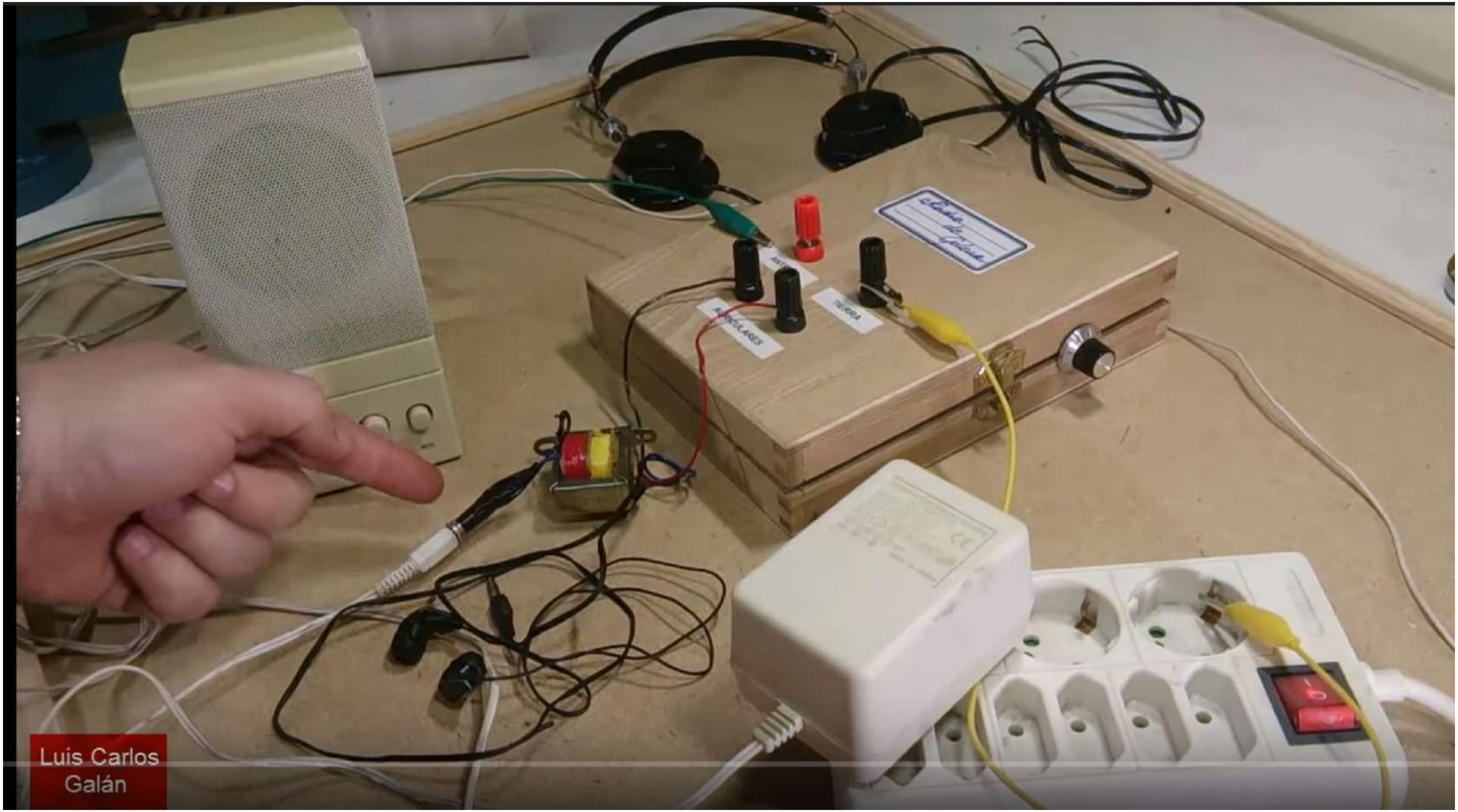

OA 81
OA 85
OA 79
OA 90
0,2 - 0,4
Ø mm
220V
9-6V
AURICULAR ↓Ω
(MONO)
CIRCUITO LC
OSCILA f(C)
is Carlos

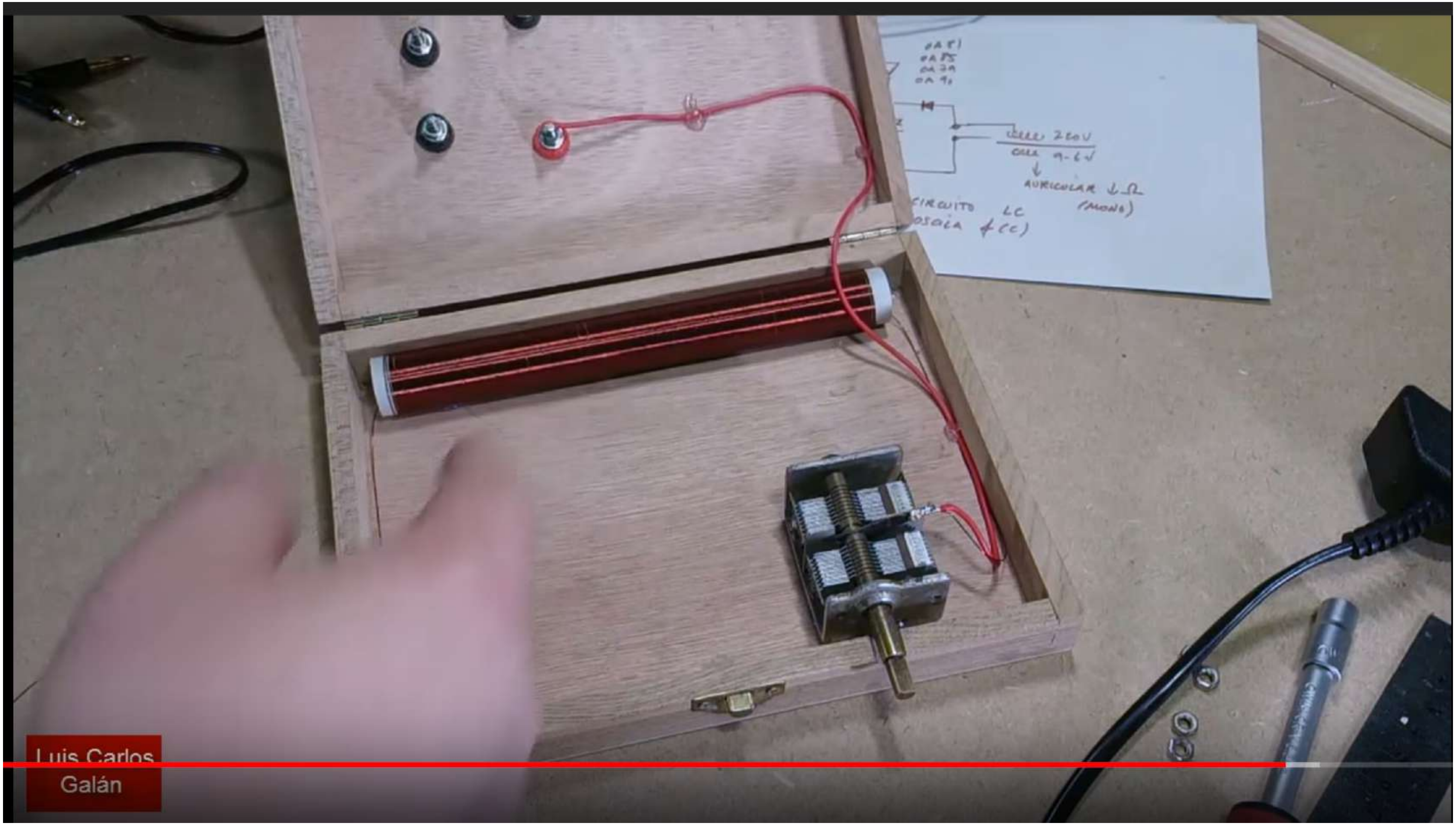

Luis Carlos
Galán

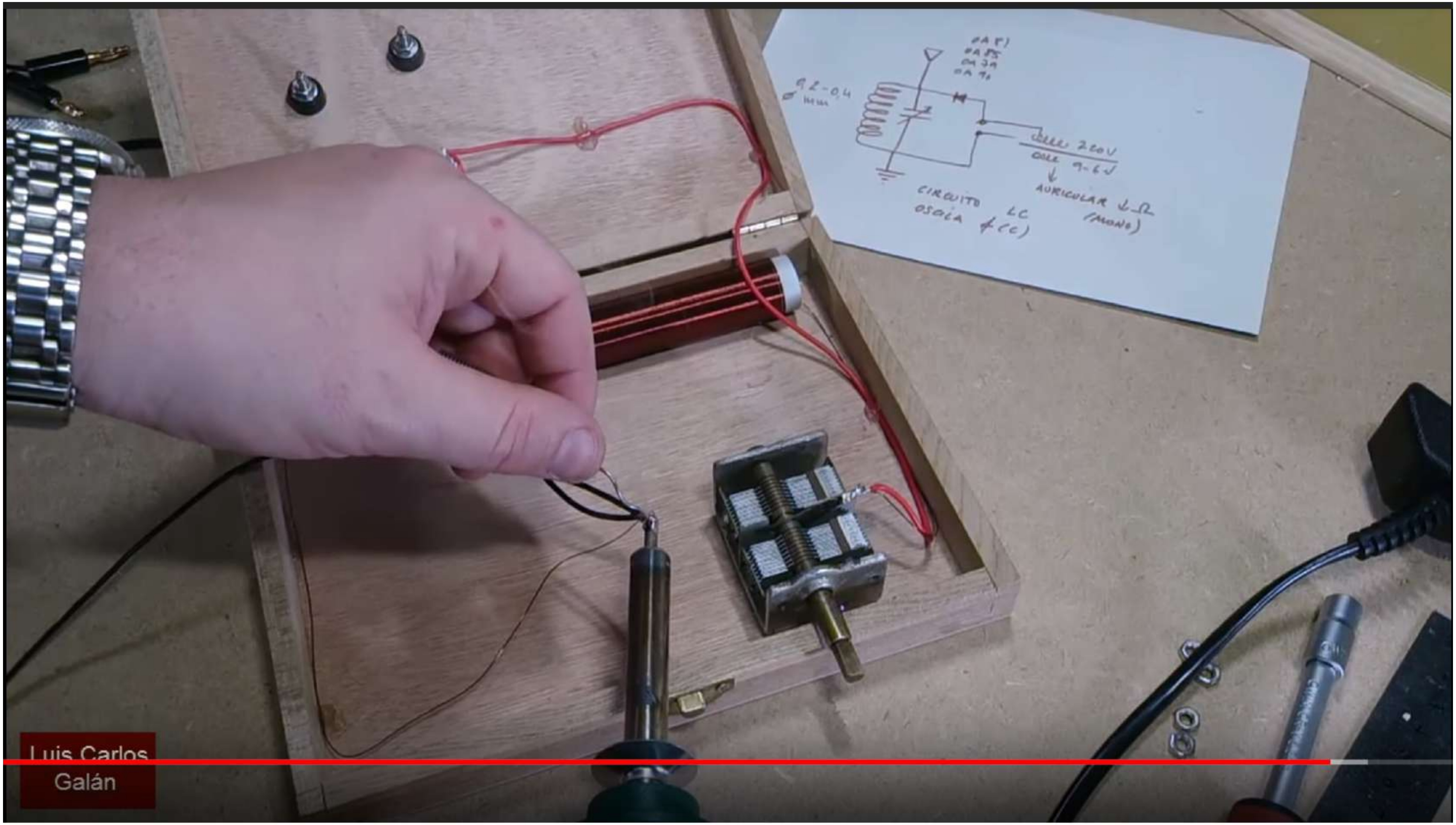

OA 85
OA 79
OA 90
0,2 - 0,4
Ø mm
220 V
9 - 6 V
AURICULAR ↓ Ω
(MONO)
CIRCUITO LC
OSCILA f (C)
Luis Carlos
Galán

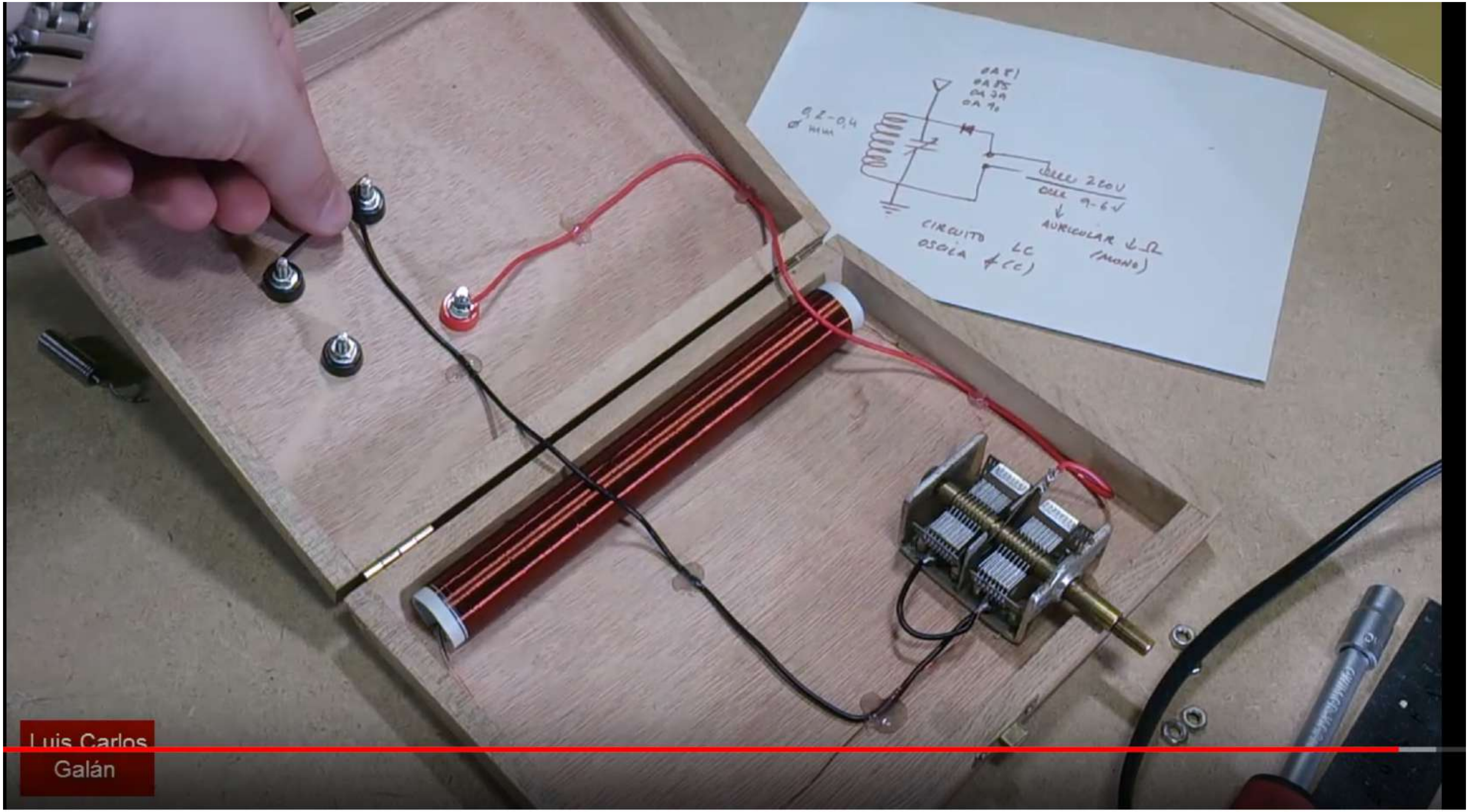

Luis Carlos
Galán


CIRCUITO LC
AURICULAR
(MONO)
Luis Carlos
Galán

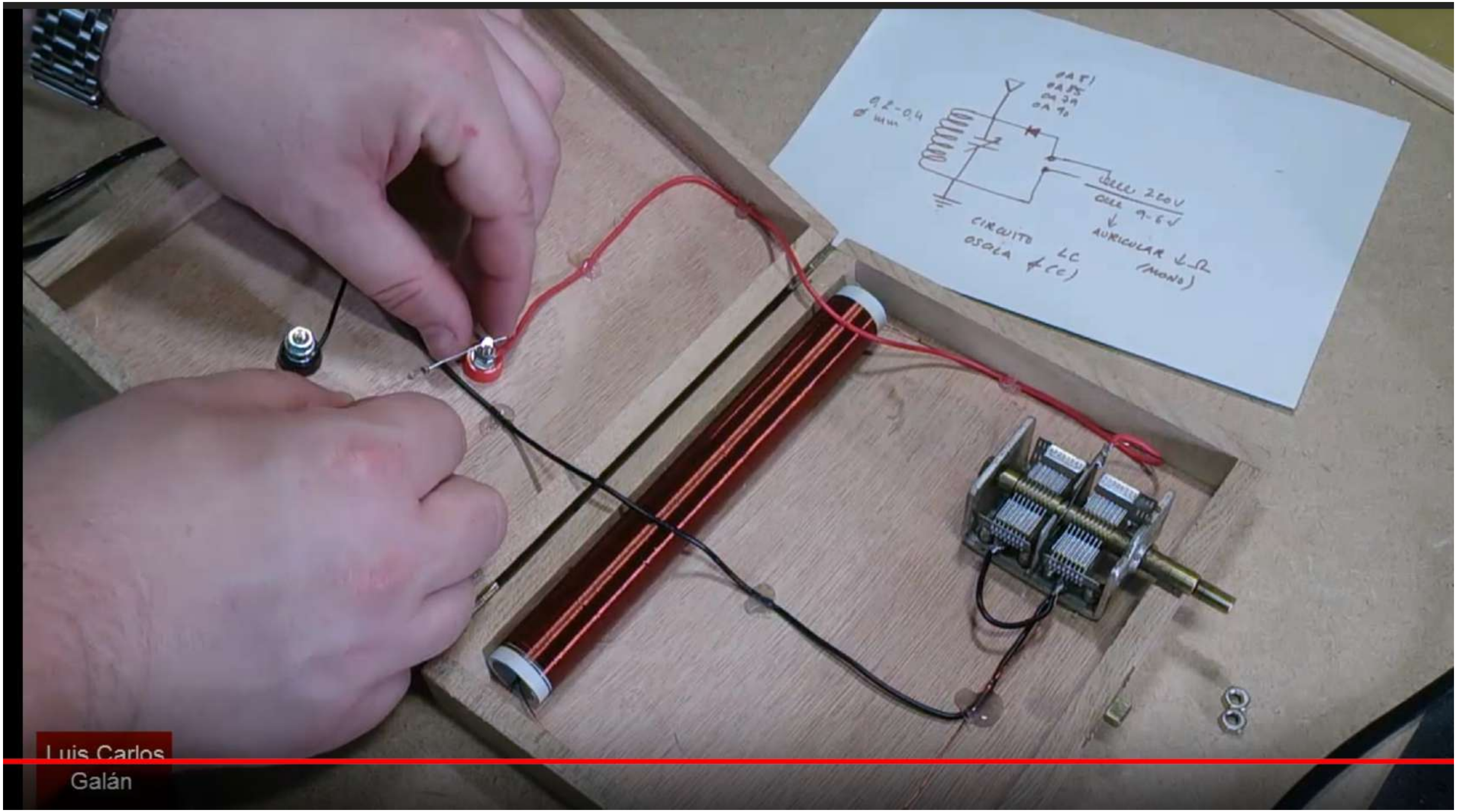

TIERRA
Luis Carlos
Galán


Luis Carlos
Galán

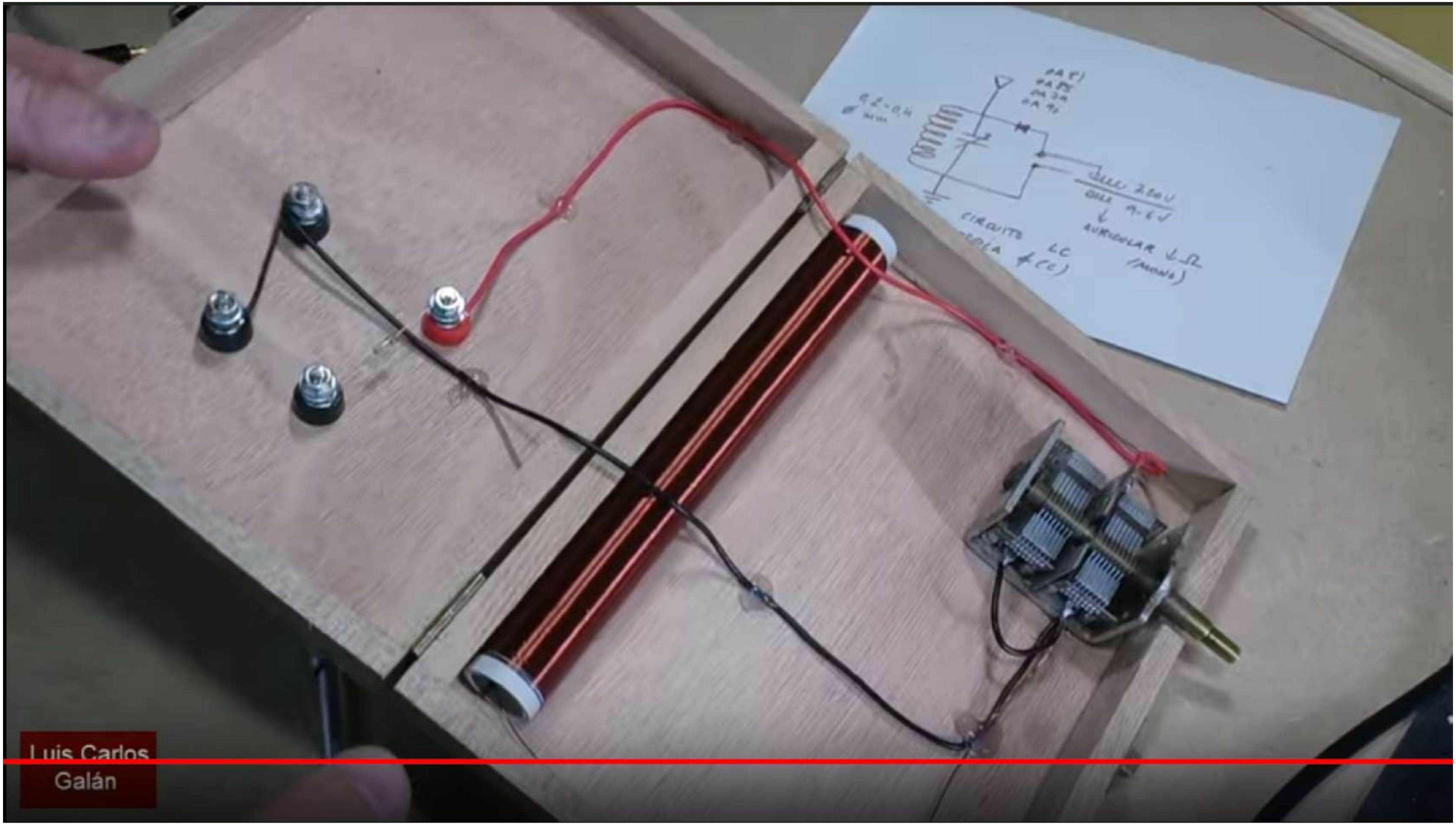

220V
AURICULAR
(MONO)
CIRCUITO LC
OSCILA
Luis Carlos Galán

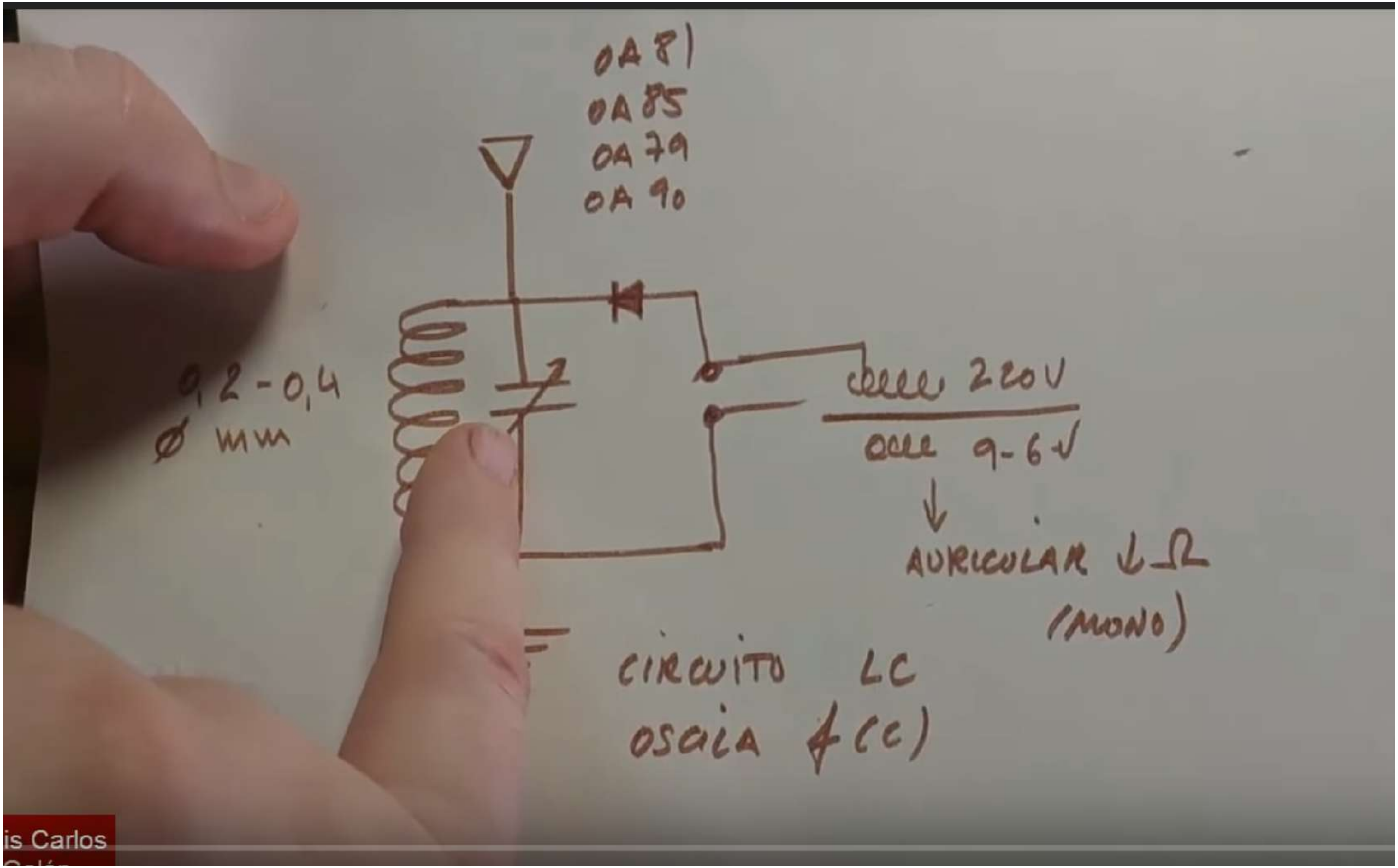


OA 81
OA 85
OA 79
OA 90
ø 0,2-0,4 mm
220V
9-6V
AURICULAR
(MONO)
CIRCUITO
OSCILA
LC
f(C)
Luis Carlos Galán

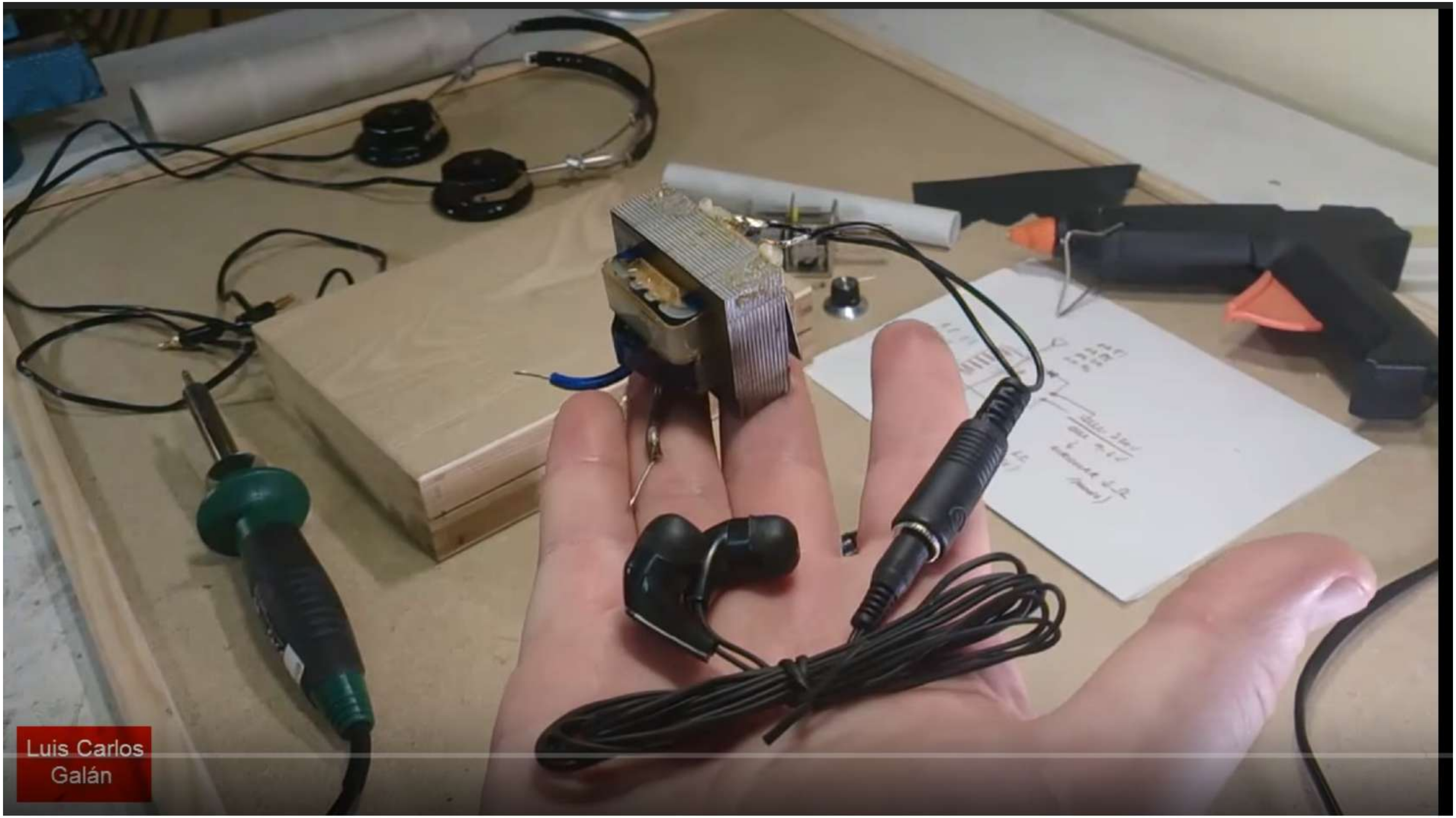


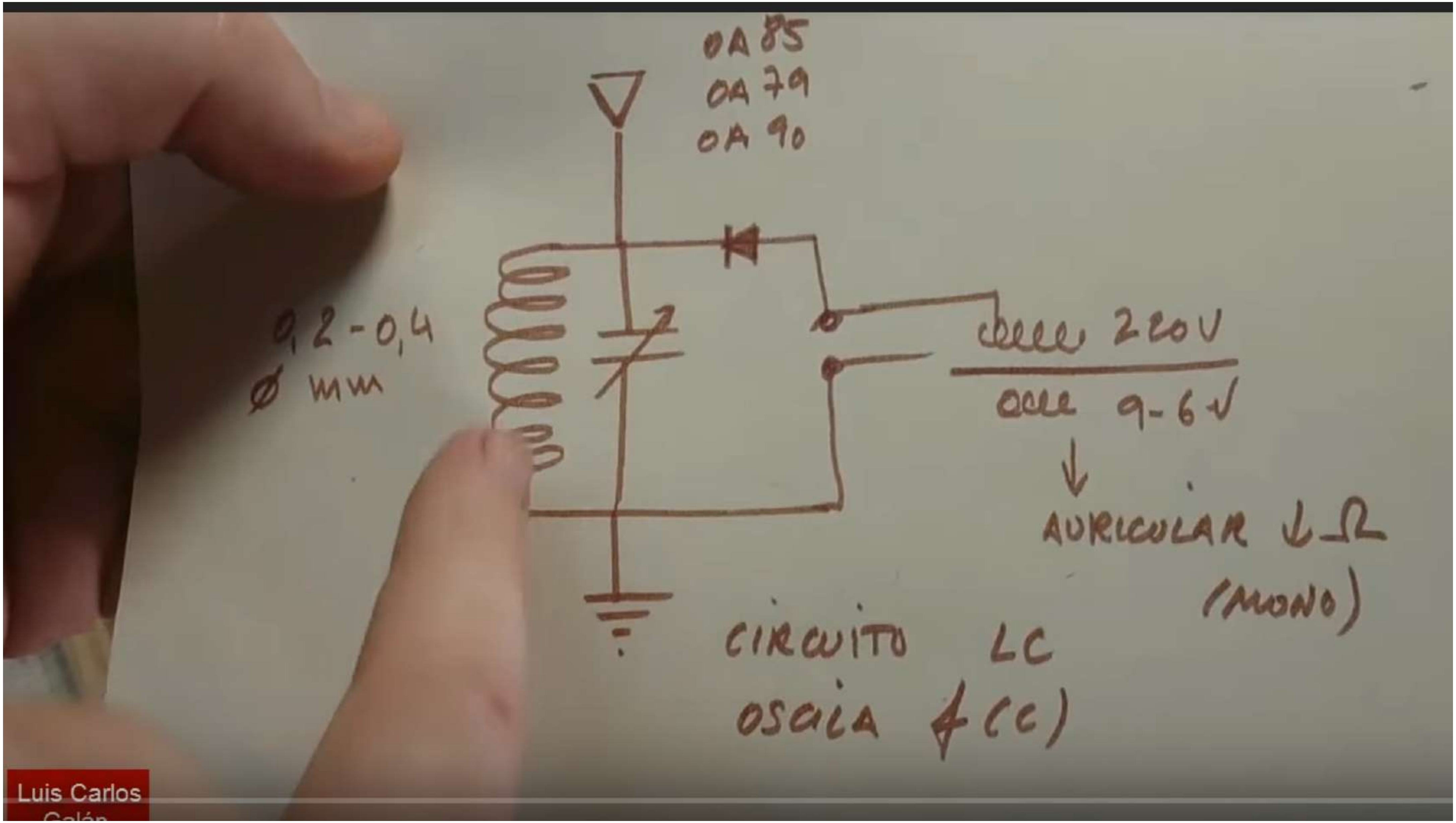
0,2-0,4
mm
OA 95
OA 79
OA 90
220V
9-6V
AURICULAR
(MONO)
CIRCUITO
OSCILA
LC
Luis Carlos
Galán


Luis Carlos
Galán



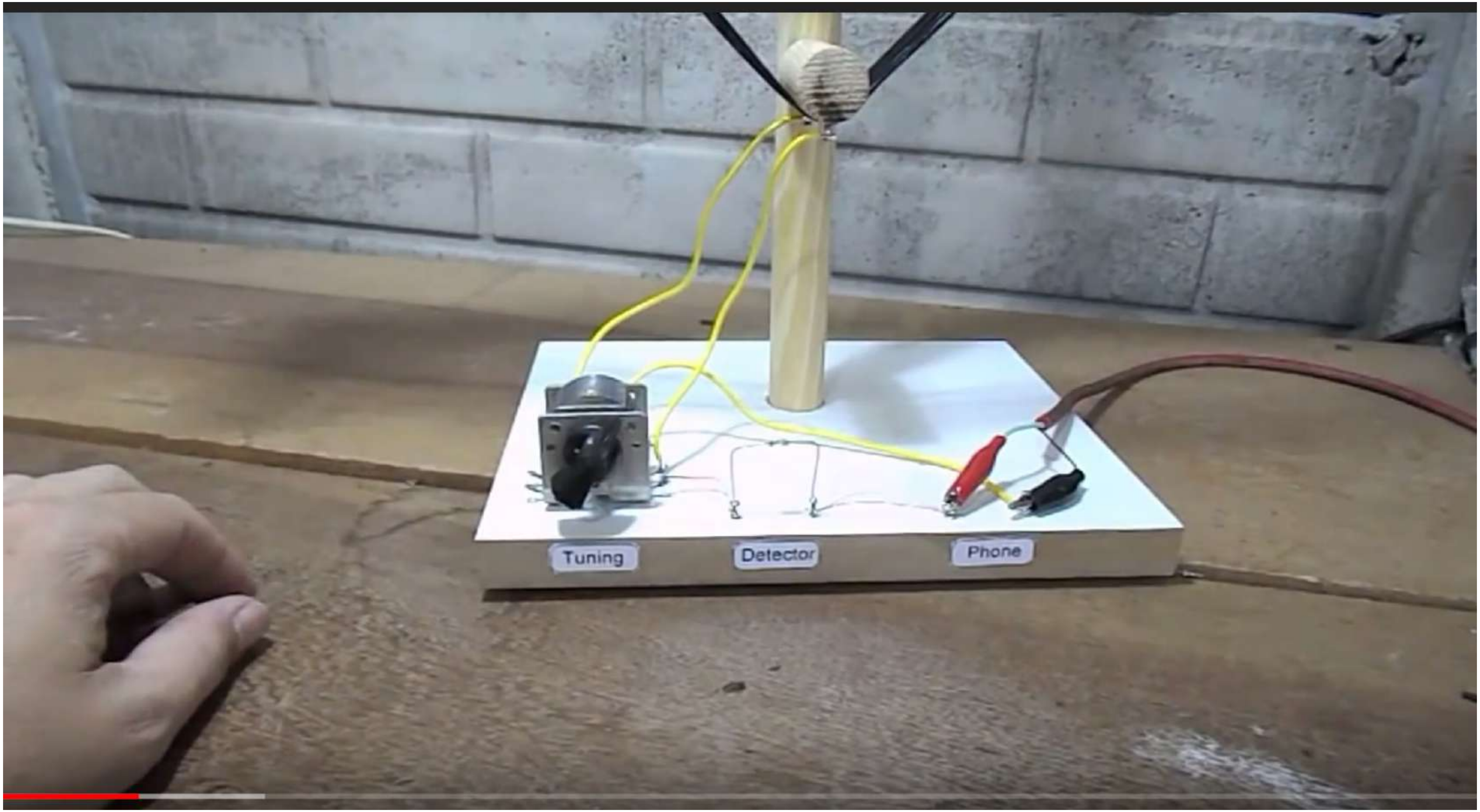
OA 81
OA 85
OA 79
OA 90
0,2 - 0,4
Ø mm
220V
9-6V
AURICULAR ↓Ω
(MONO)
CIRCUITO LC
OSCILA f(C)
is Carlos

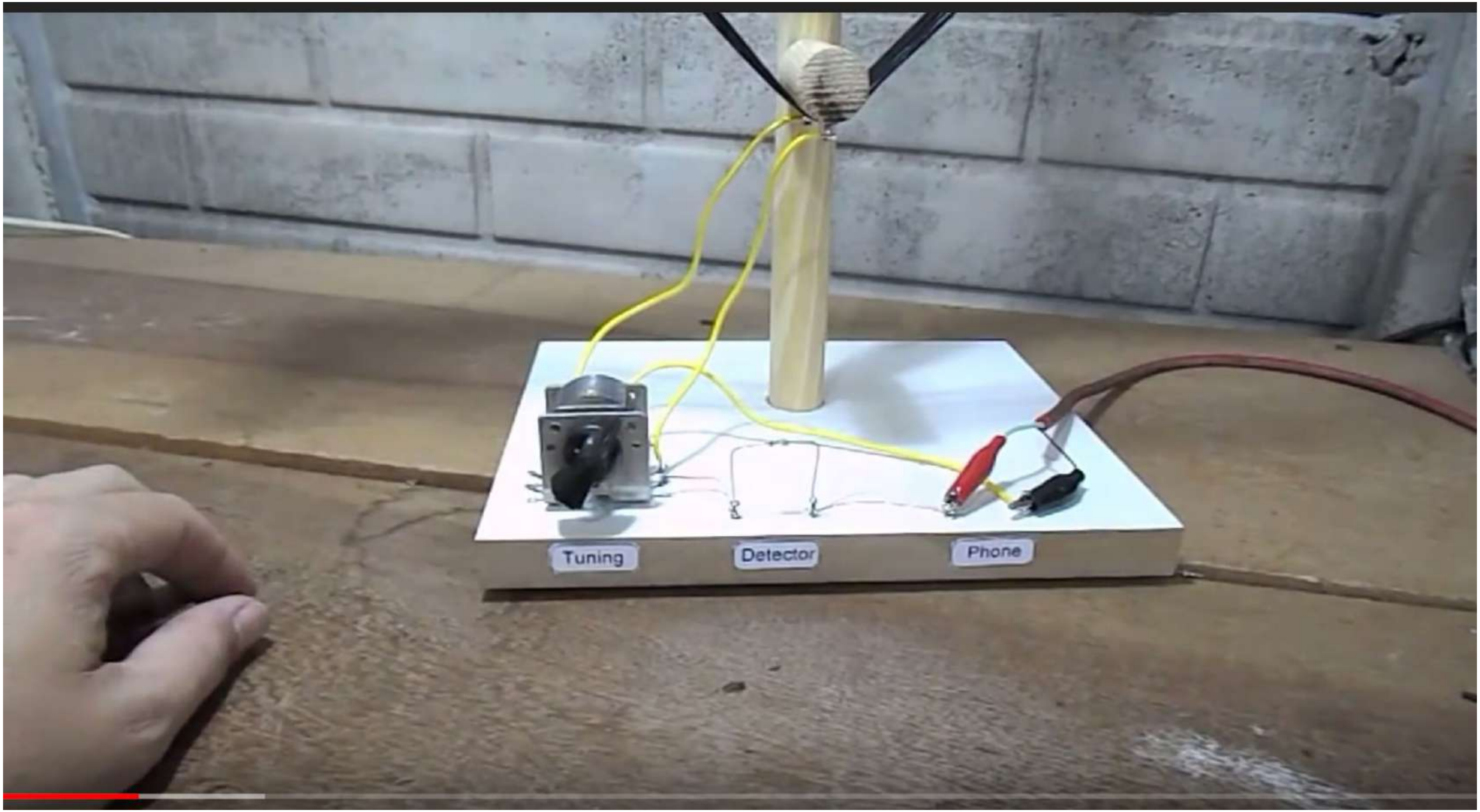

Luis Carlos
Galán

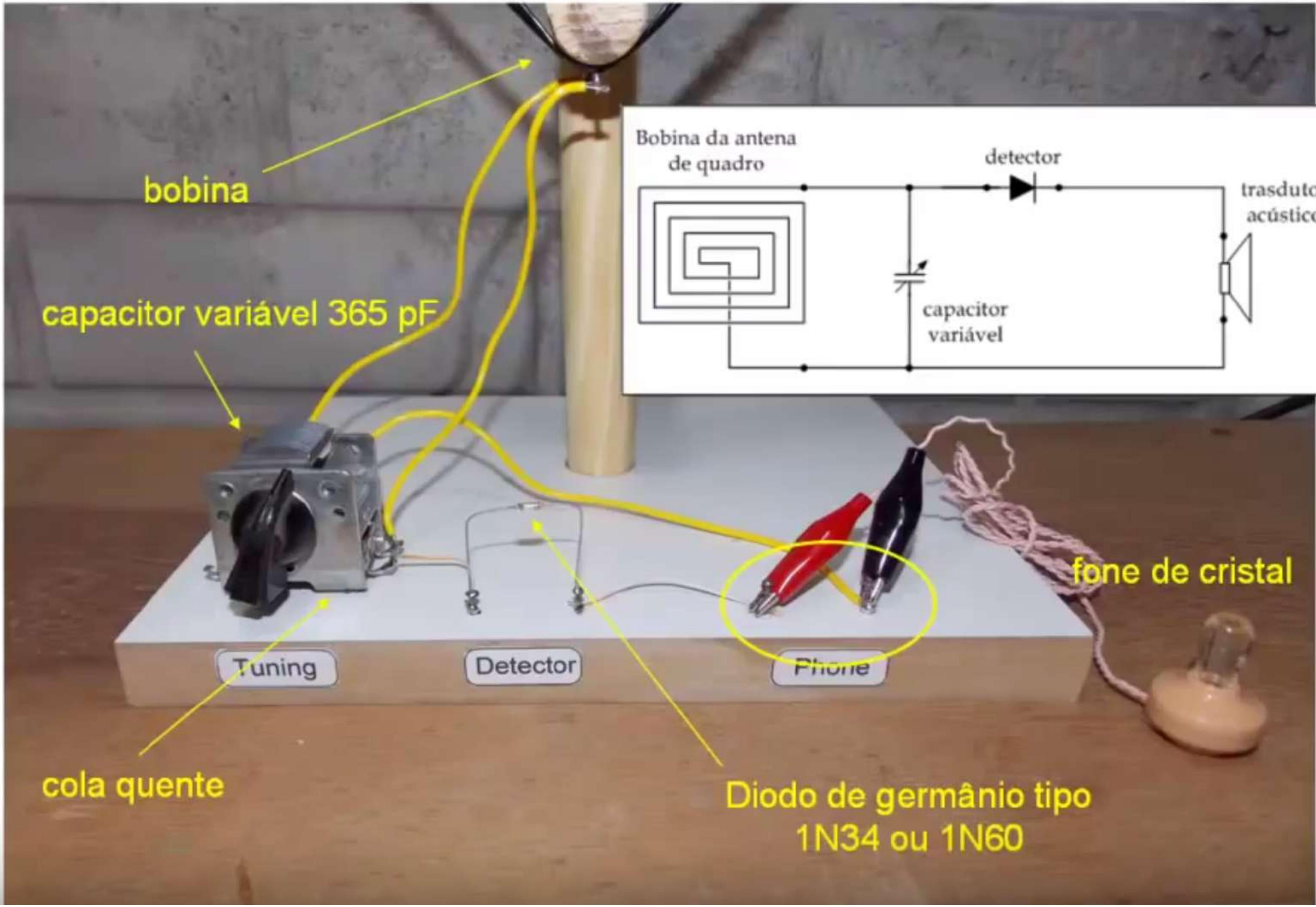

OA 85
OA 79
OA 90
0,2 - 0,4
Ø mm
220 V
9 - 6 V
AURICULAR
(MONO)
CIRCUITO LC
OSCILA
Luis Carlos


Luis Carlos
Galán

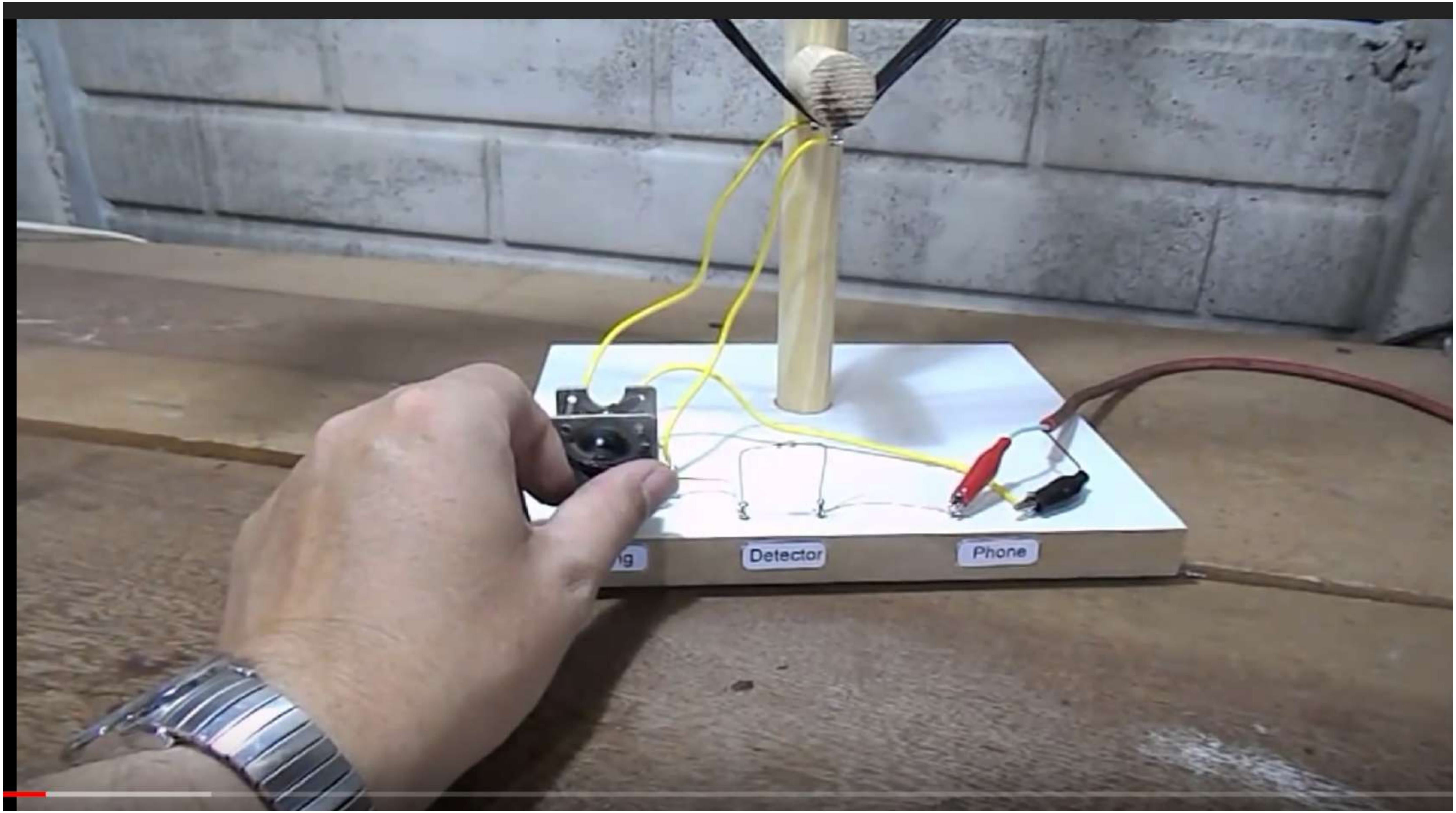

Luis Carlos
Galán

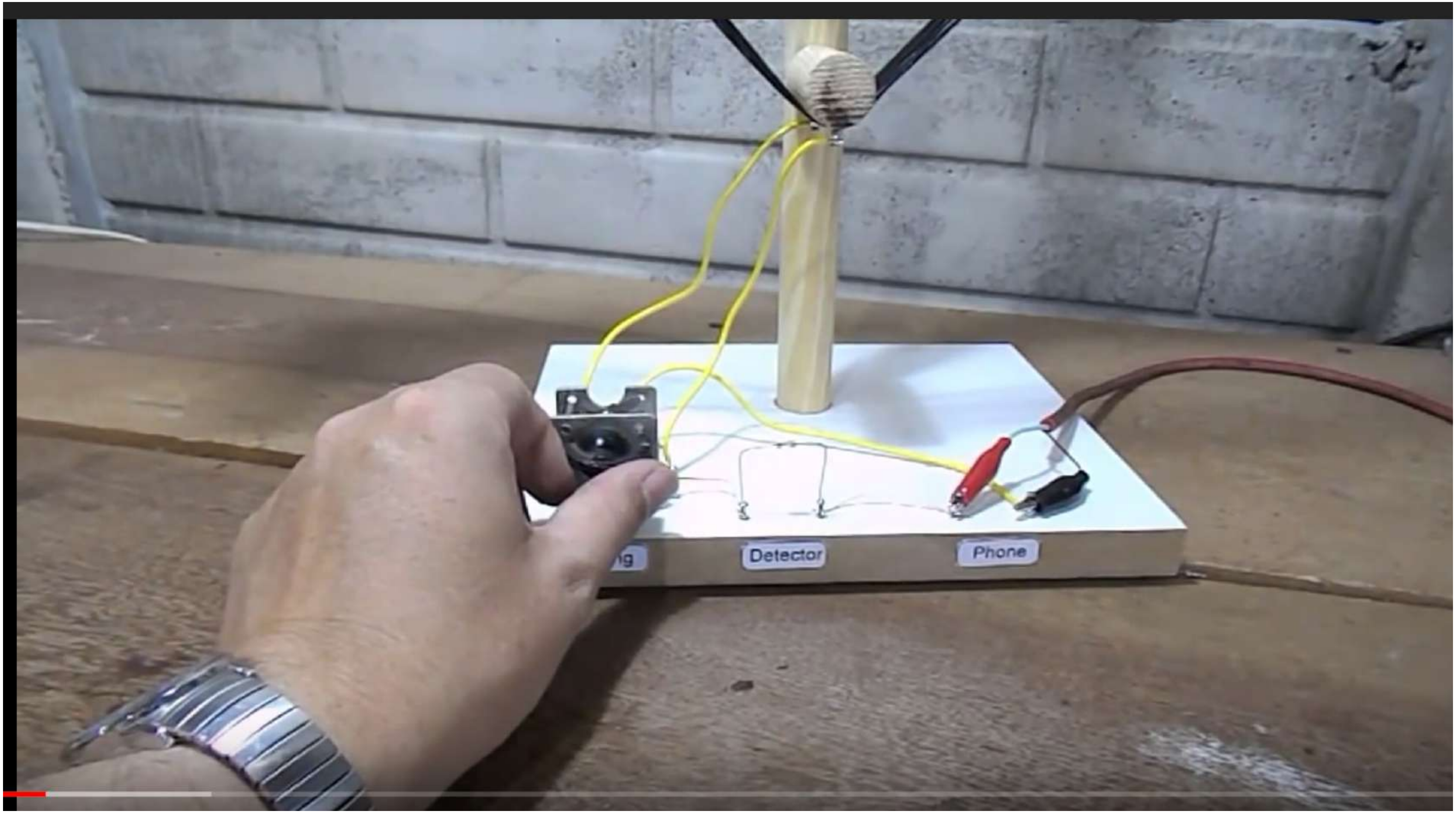

Tuning
Detector
Phone

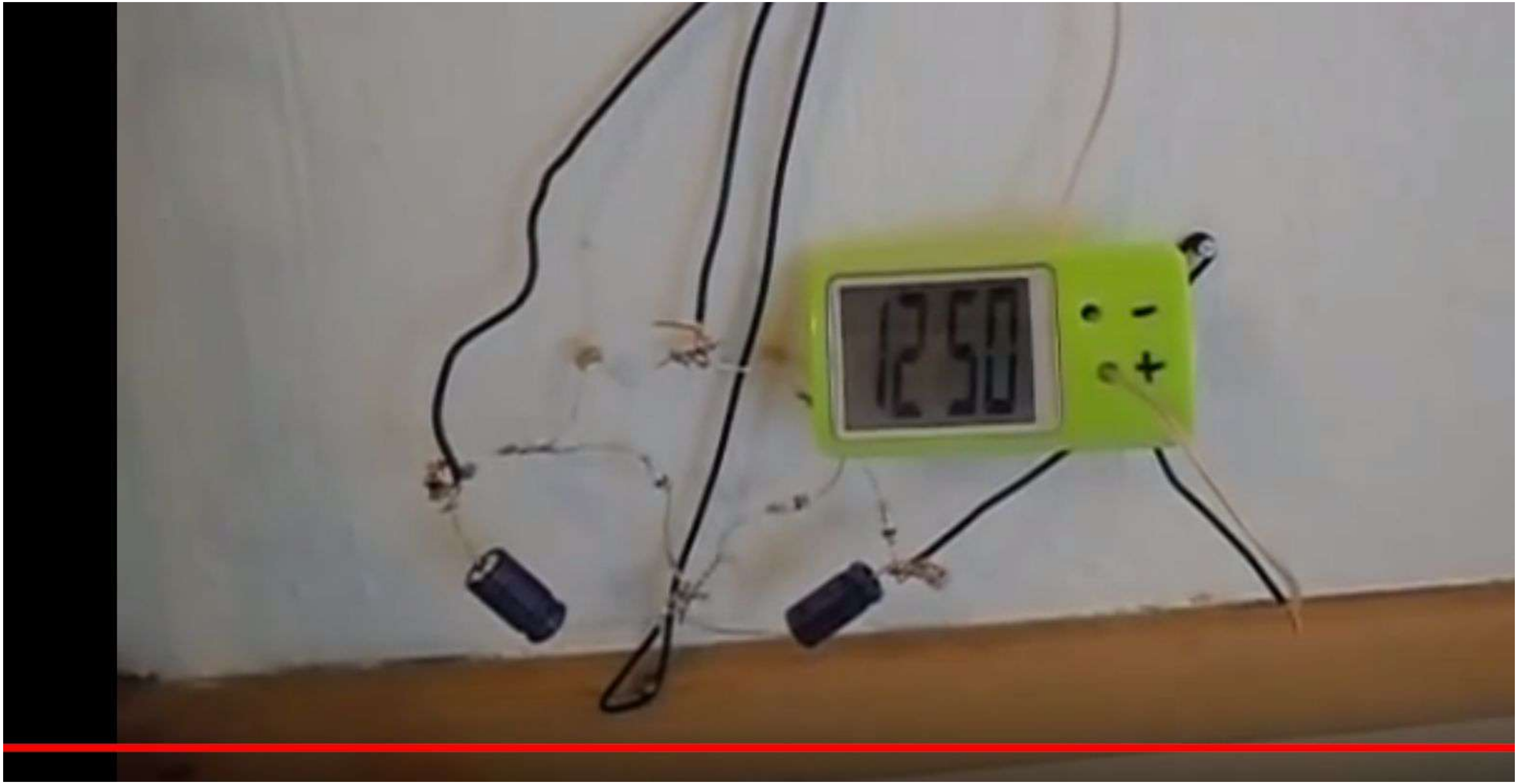

Tuning
Detector
Phone



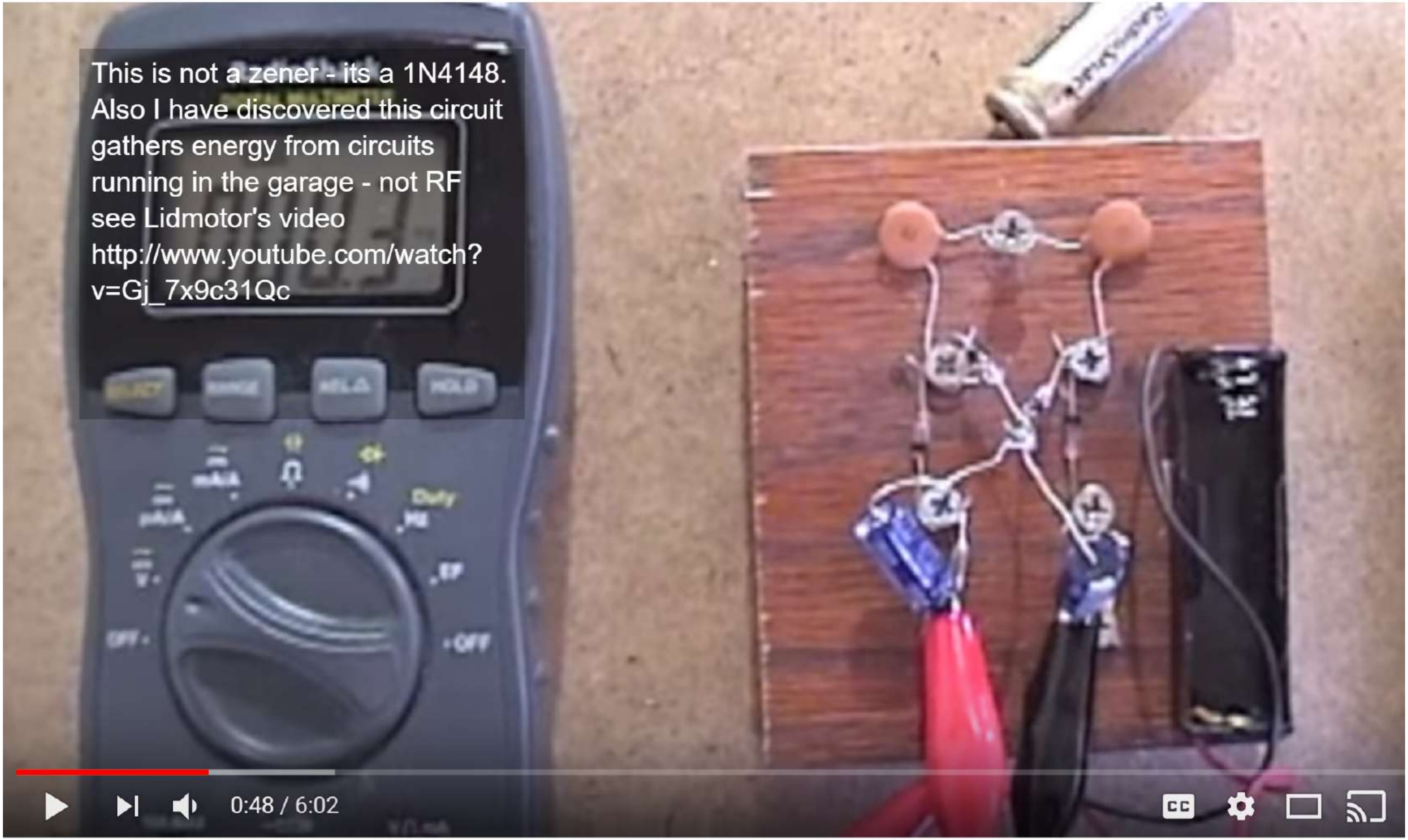
bobina
capacitor variável 365 pF
cola quente
Tuning
Detector
Phone
fone de cristal
Diodo de germânio tipo
1N34 ou 1N60
Bobina da antena
de quadro
detector
trasdutor
acústico
capacitor
variável


Detector
Phone


Detector
Phone




This is not a zener - its a 1N4148.
Also I have discovered this circuit
gathers energy from circuits
running in the garage - not RF
see Lidmotor's video
http://www.youtube.com/watch?
v=Gj_7x9c31Qc
0:32 / 6:02


This is not a zener - its a 1N4148.
Also I have discovered this circuit
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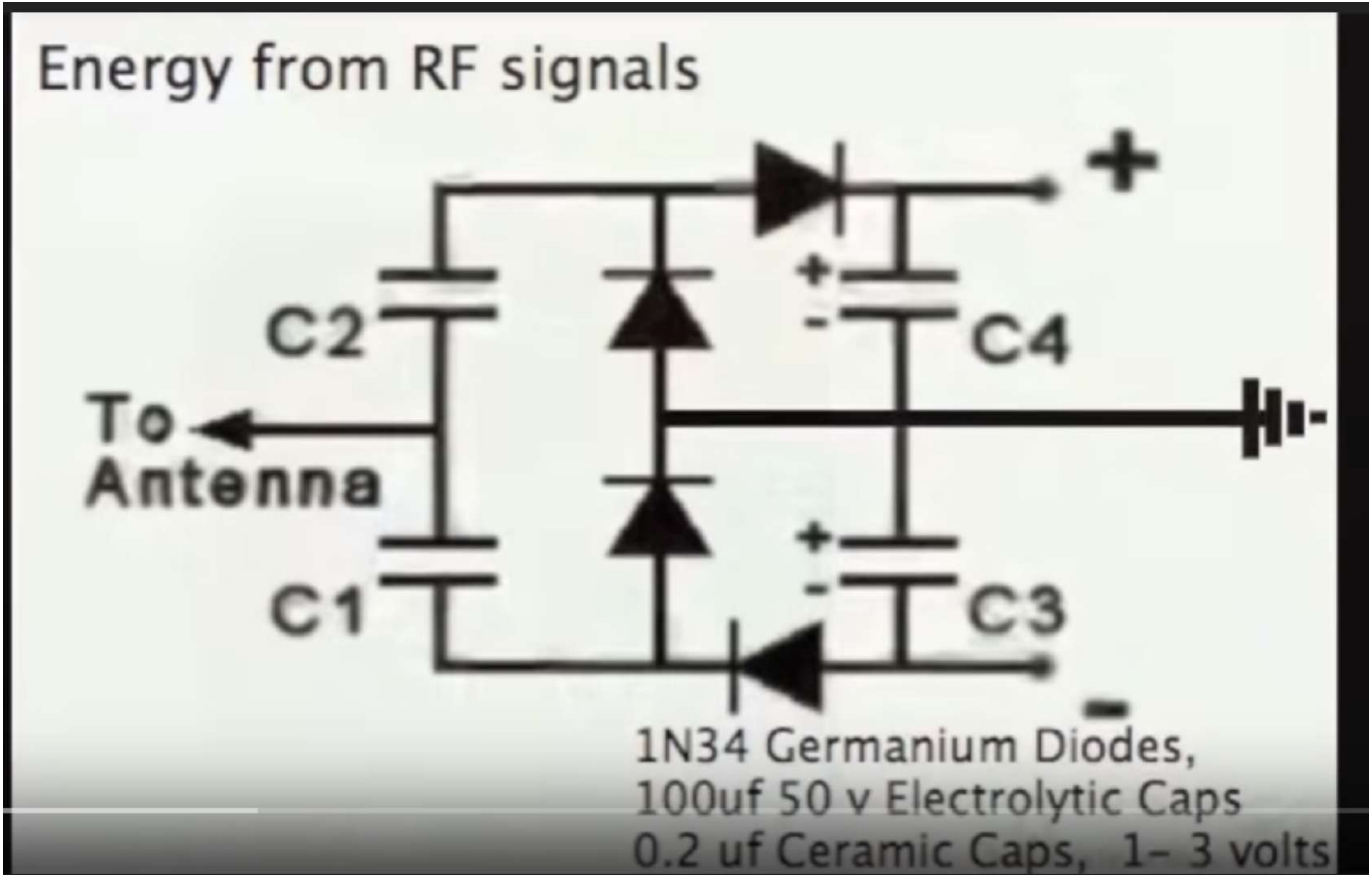
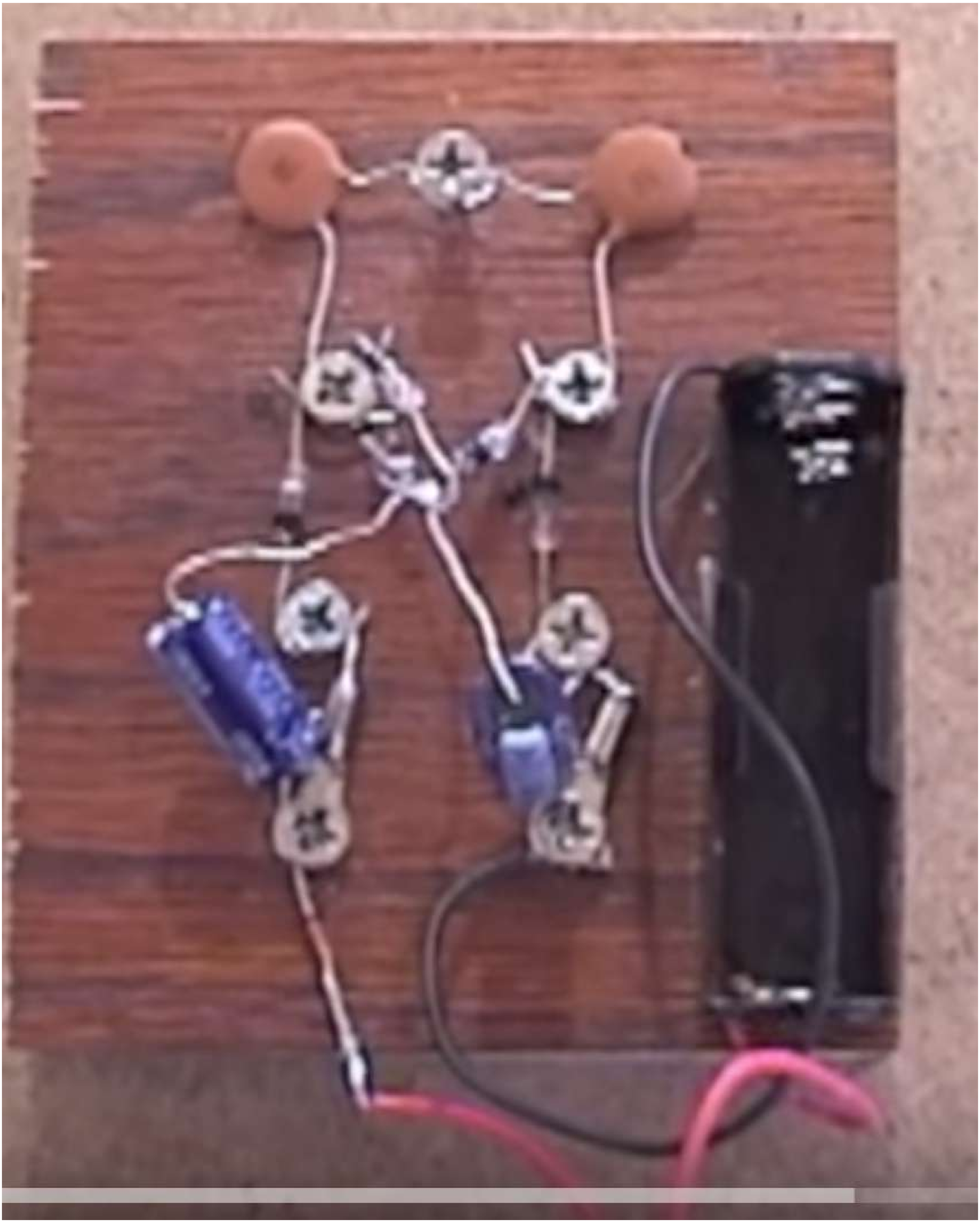
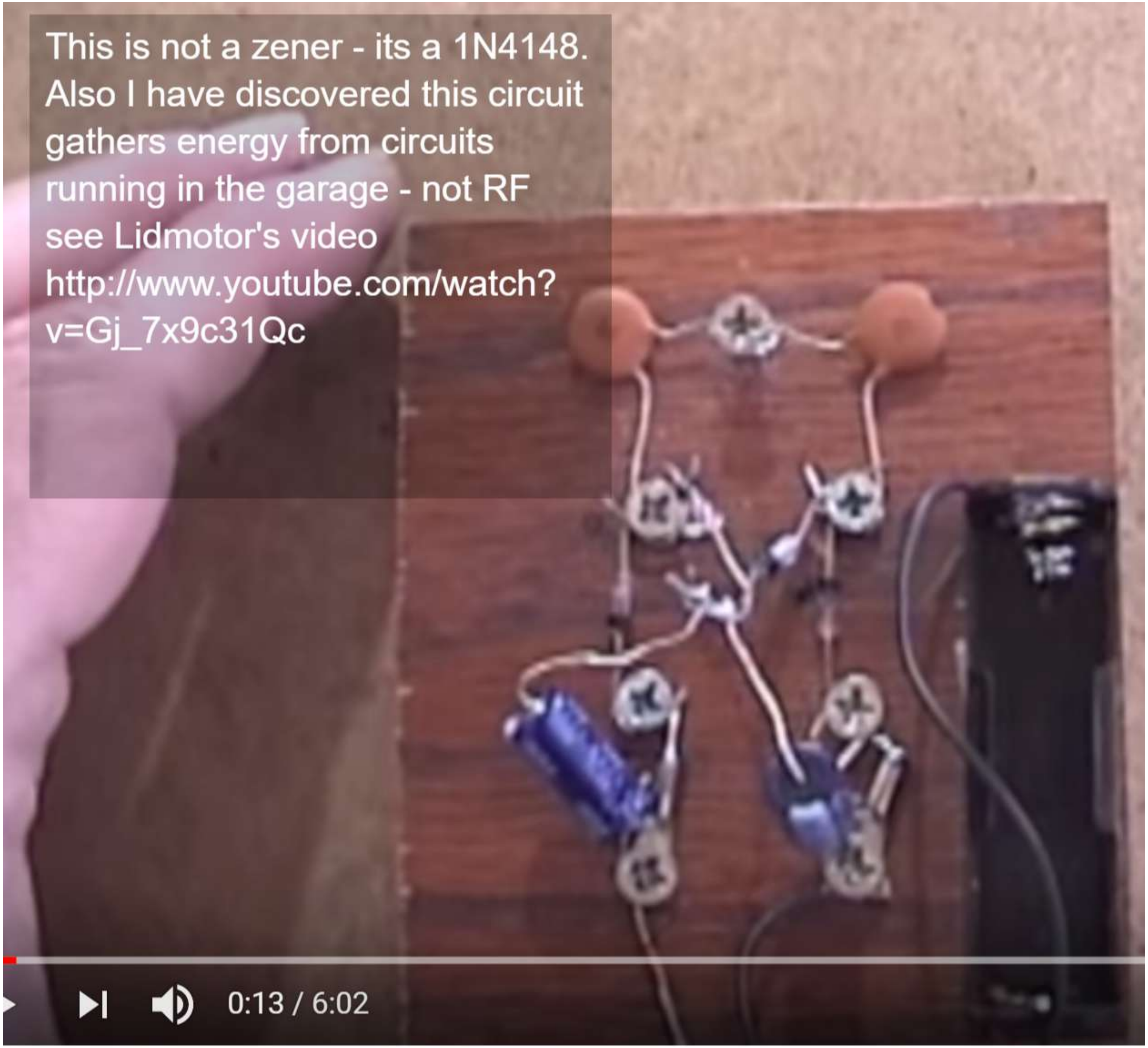
http://www.youtube.com/watch?
v=Gj_7x9c31Qc
0:48 / 6:02


0:16 / 6:02


Energy from RF signals
+
C2
C4
To
Antenna
C1
C3
1N34 Germanium Diodes,
100uf 50 v Electrolytic Caps
0.2 uf Ceramic Caps, 1- 3 volts




This is not a zener - its a 1N4148.
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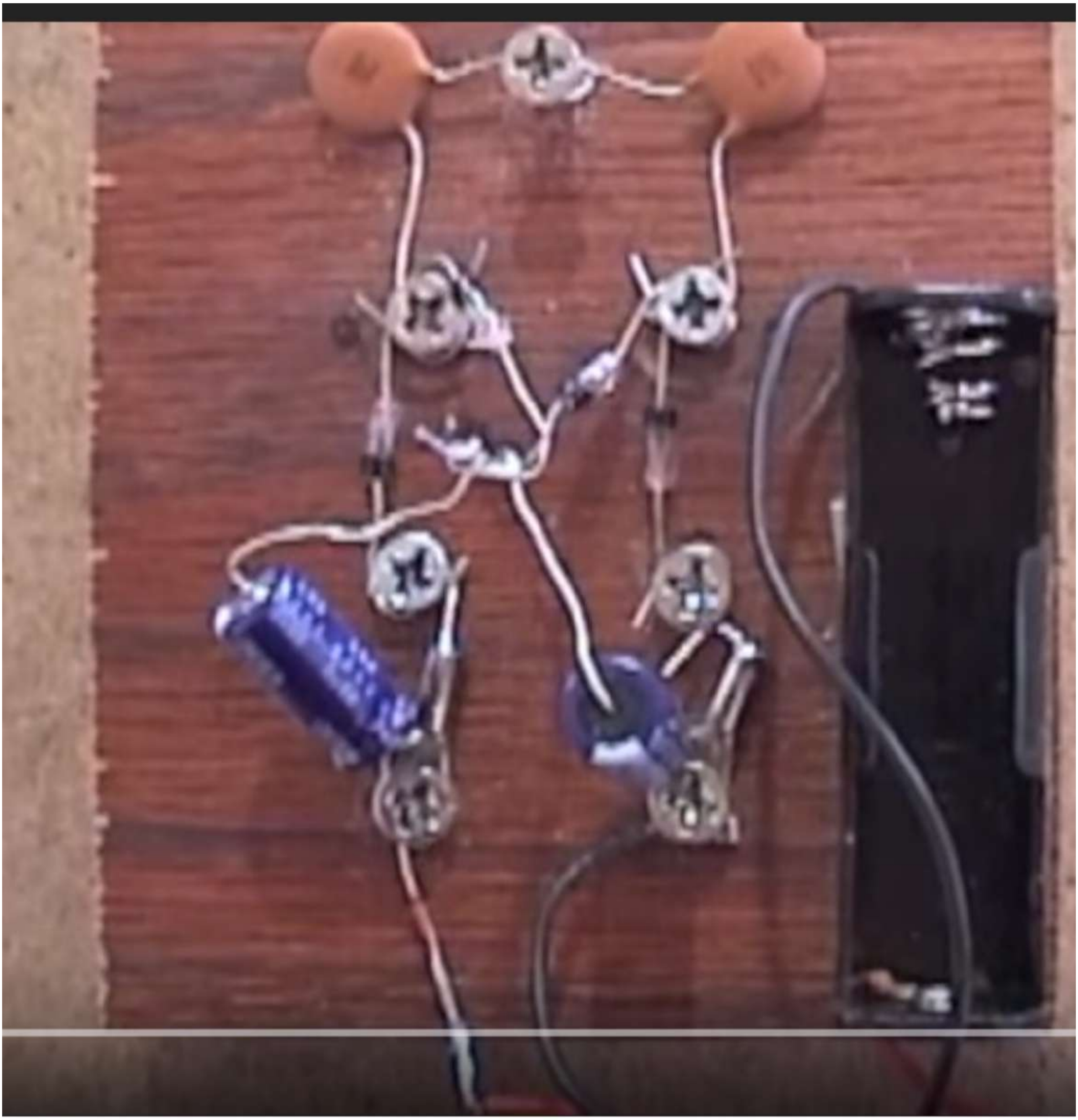
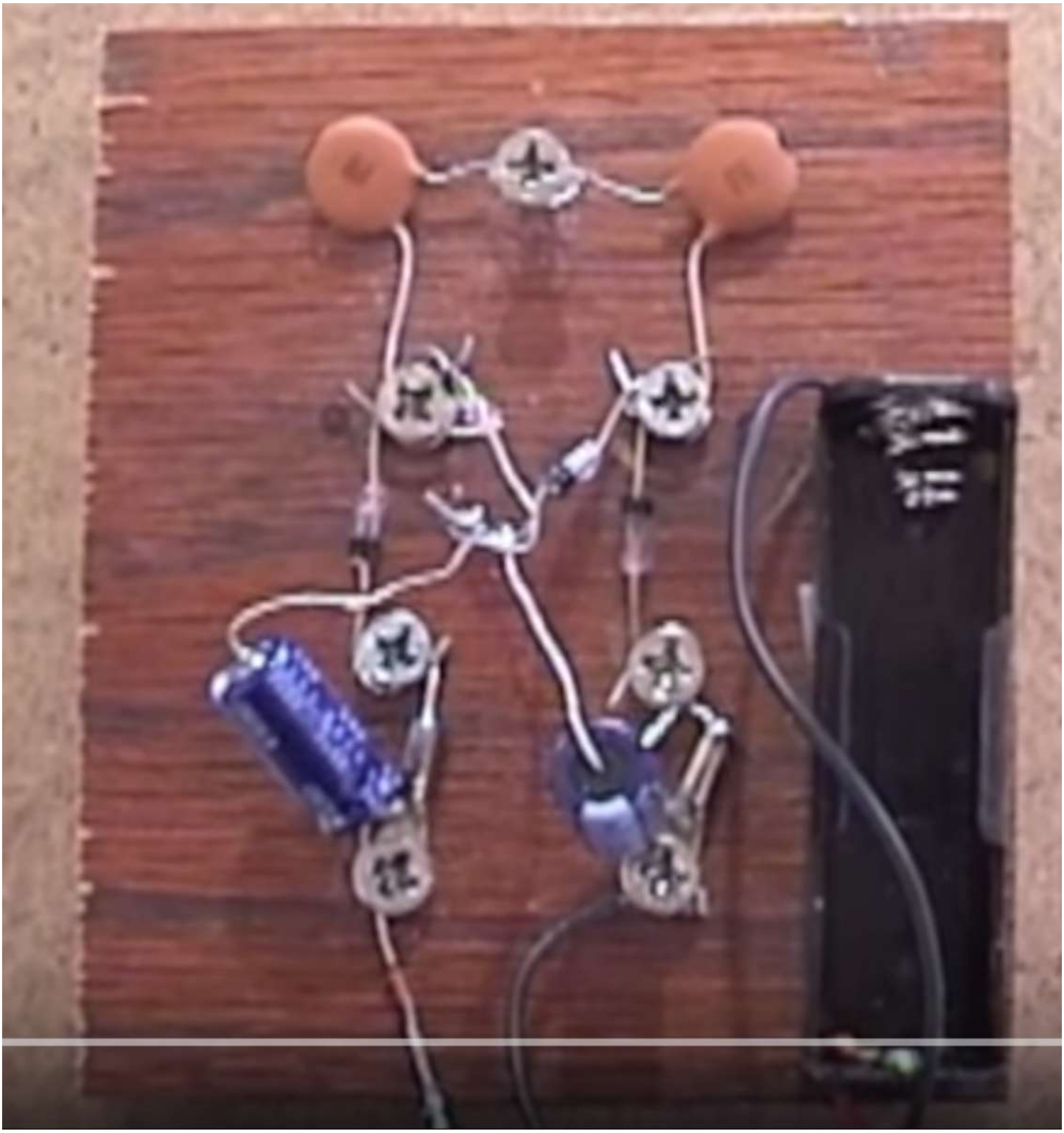
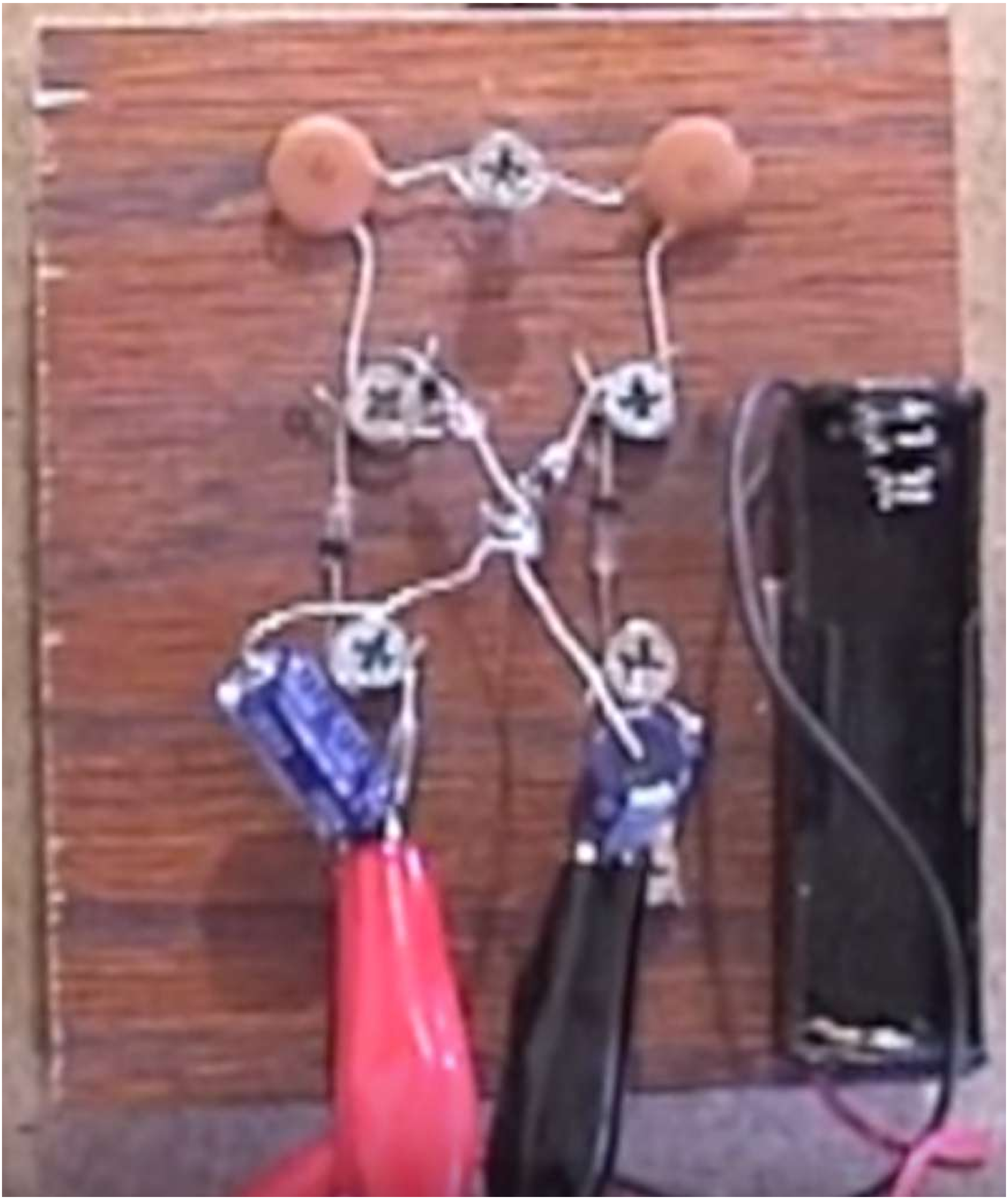
v=Gj_7x9c31Qc
0:16 / 6:02








This is not a zener - its a 1N4148.
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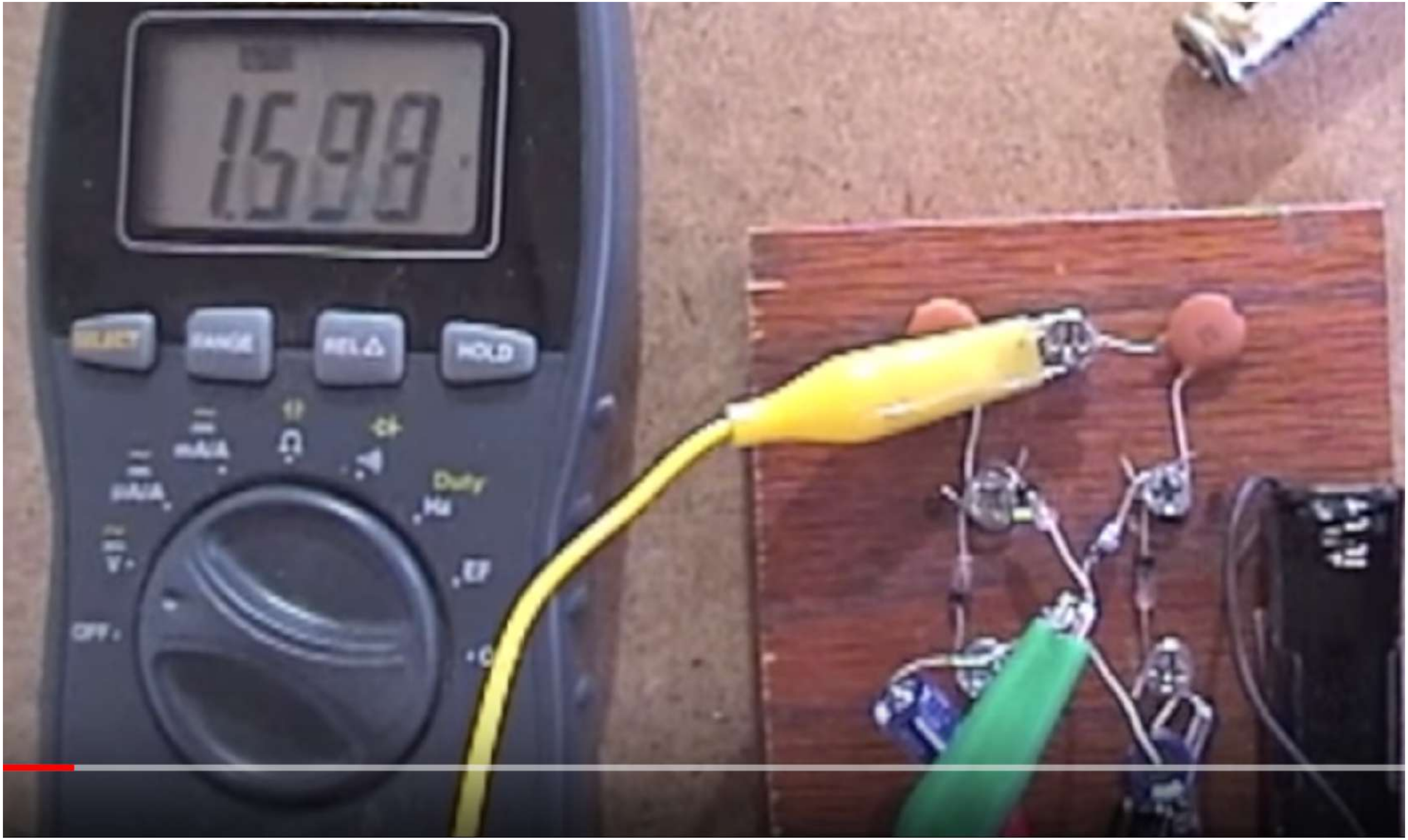
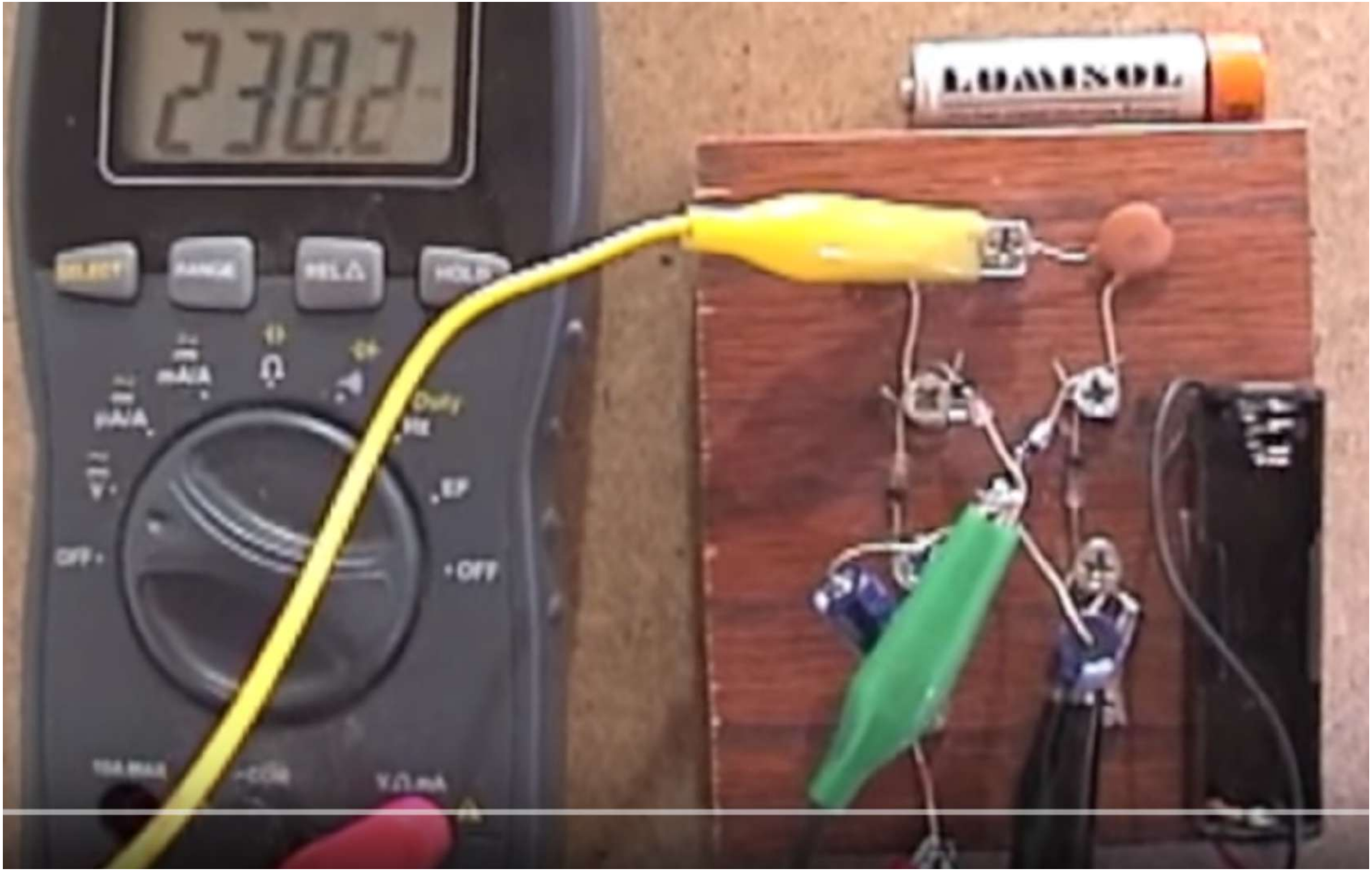
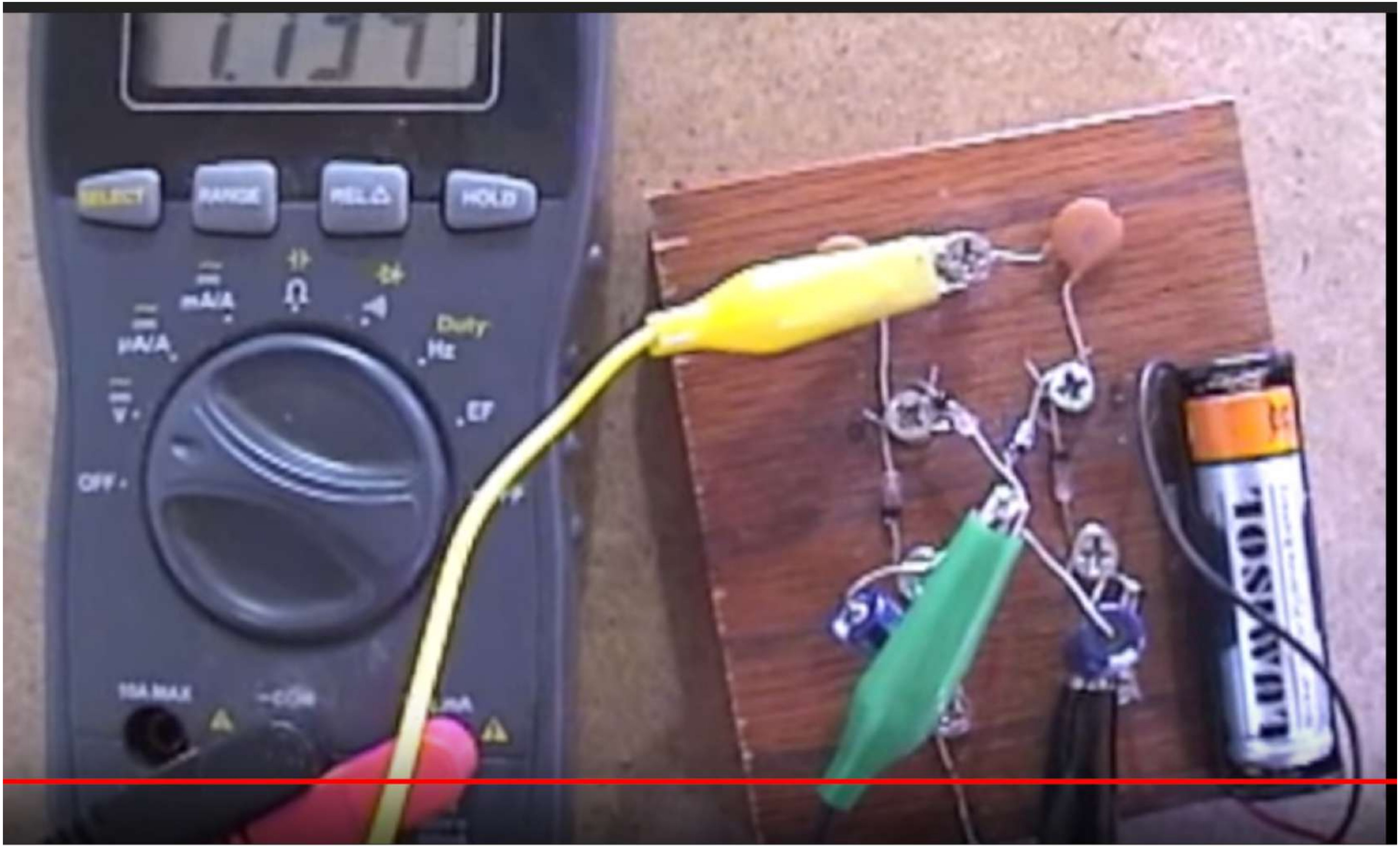
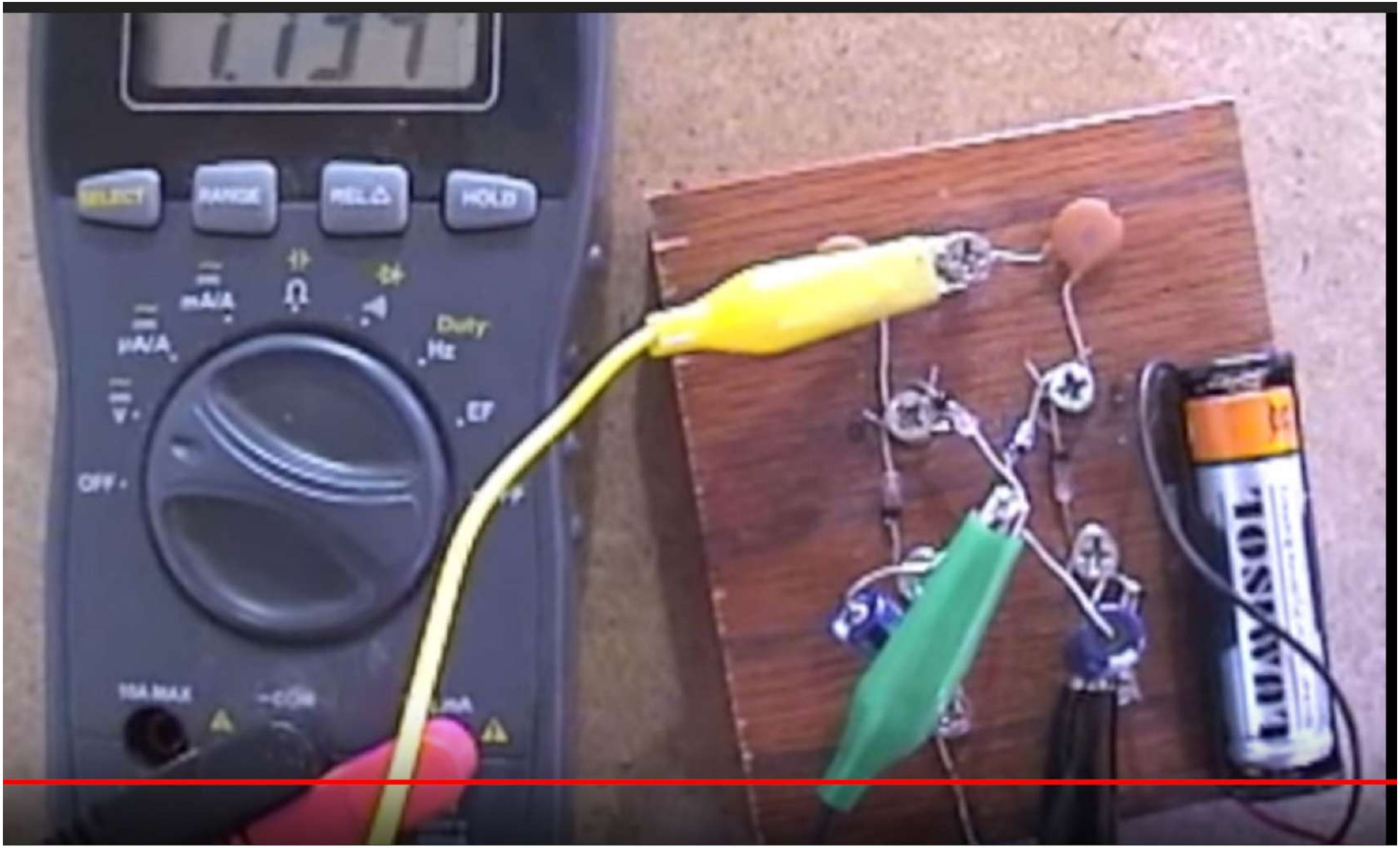
see Lidmotor's video
http://www.youtube.com/watch?
v=Gj_7x9c31Qc
0:32 / 6:02


1.598
SELECT
RANGE
REL△
HOLD
mA/A
µA/A
Duty
Hz
EF
OFF


238.2
LUMINOL

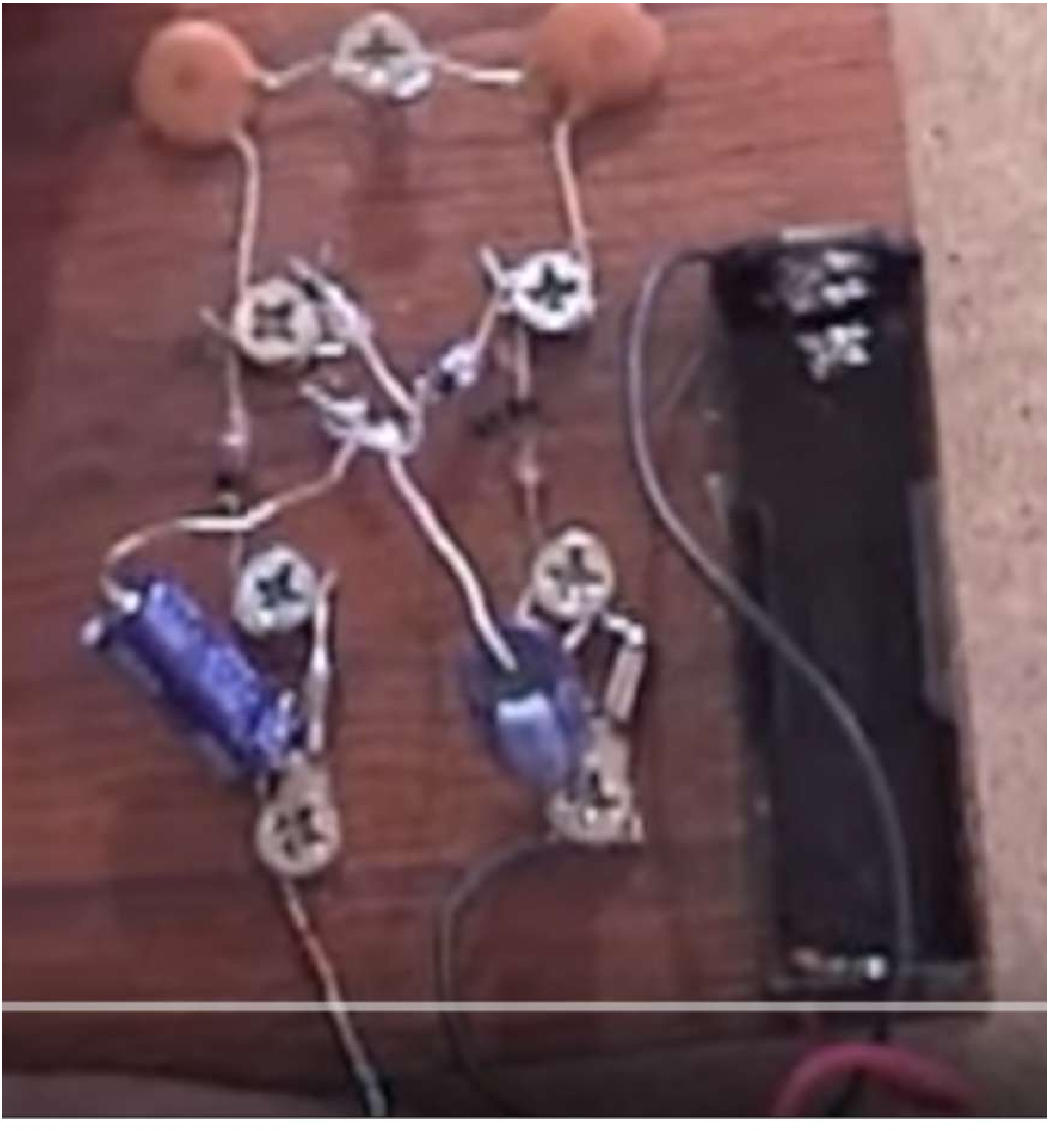

0:16 / 6:02

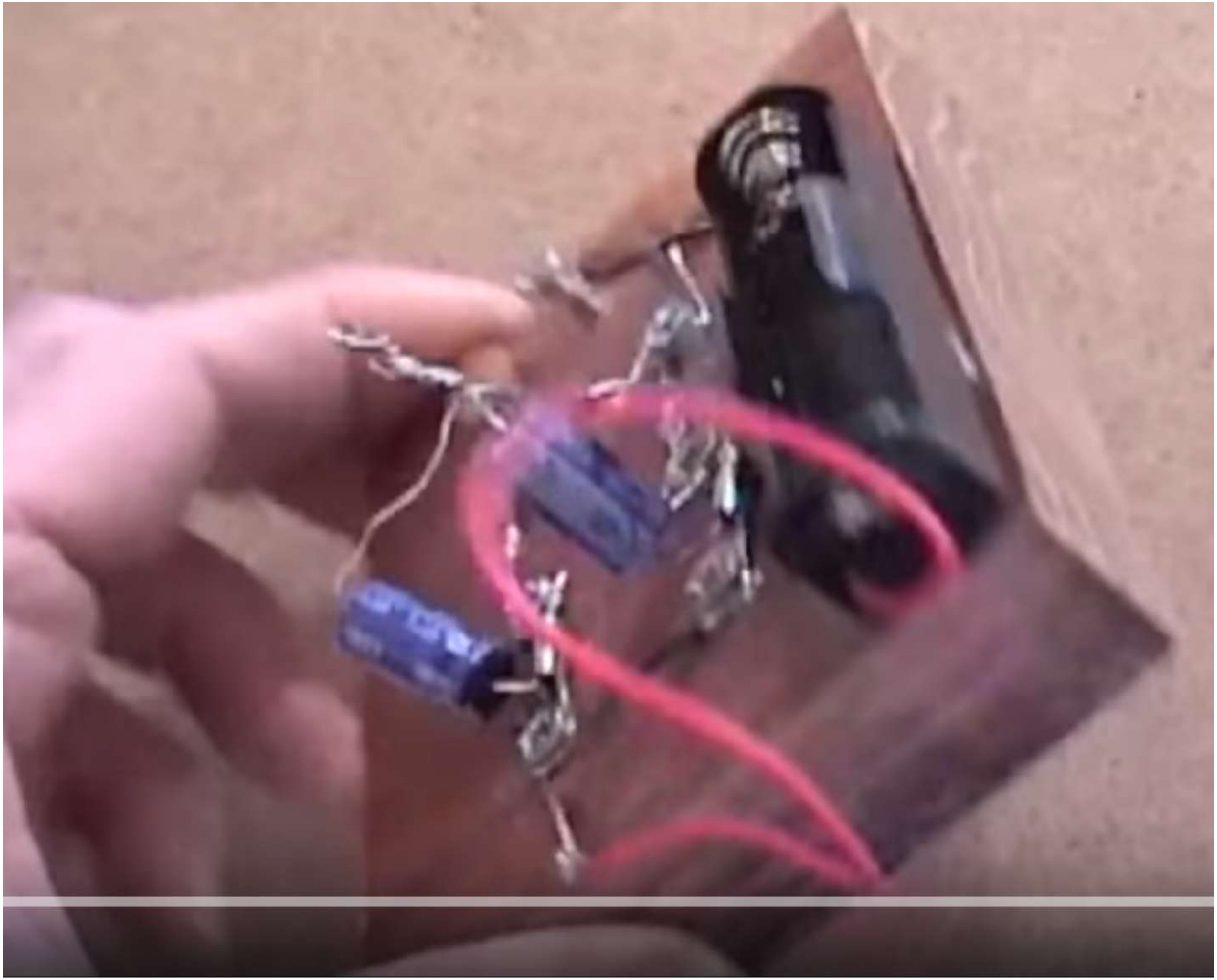

SELECT
RANGE
REL
HOLD
mA/A
µA/A
Duty
Hz
OFF
10A MAX
COM


1.739
SELECT
RANGE
REL△
HOLD
mA/A
μA/A
Ω
Duty
Hz
OFF
COM
LUXWSOL

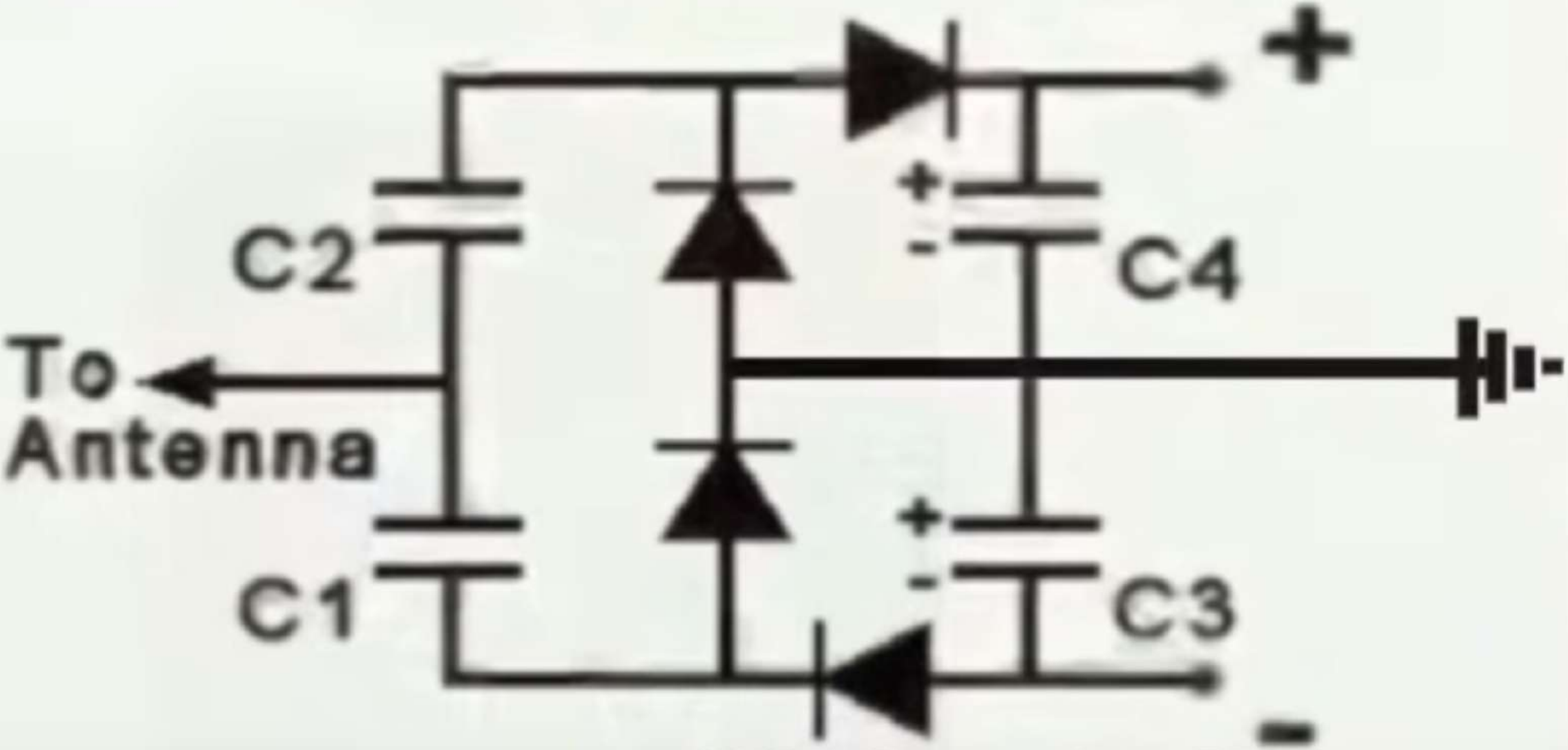

DIGITAL MULTIMETER
000.3
HOLD
Duty
Hz
OFF
OFF

DIGITAL MULTIMETER
000.3
SELECT
RANGE
HOLD
mA/A
Duty
Hz
µA/A
OFF
OFF

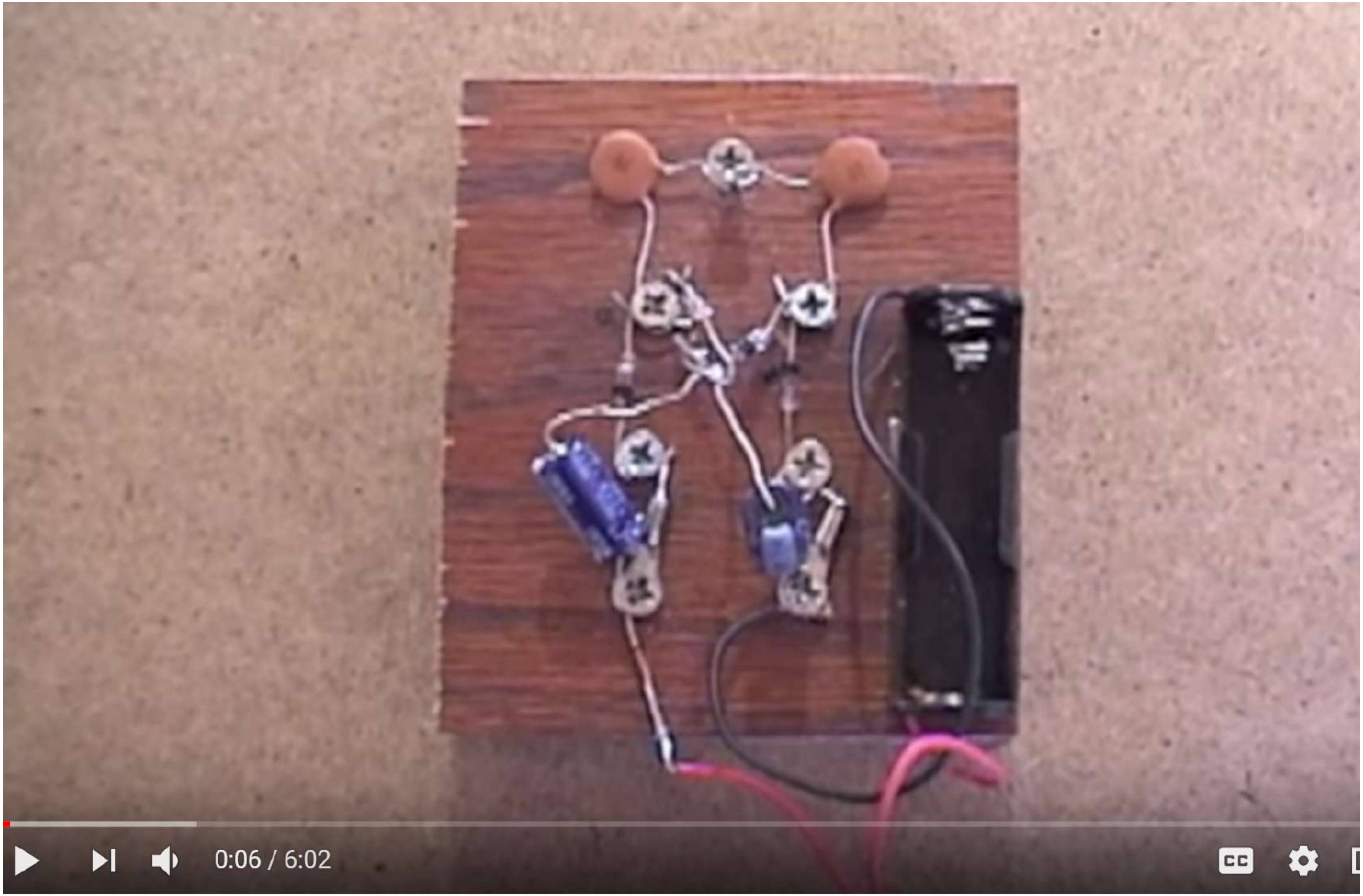




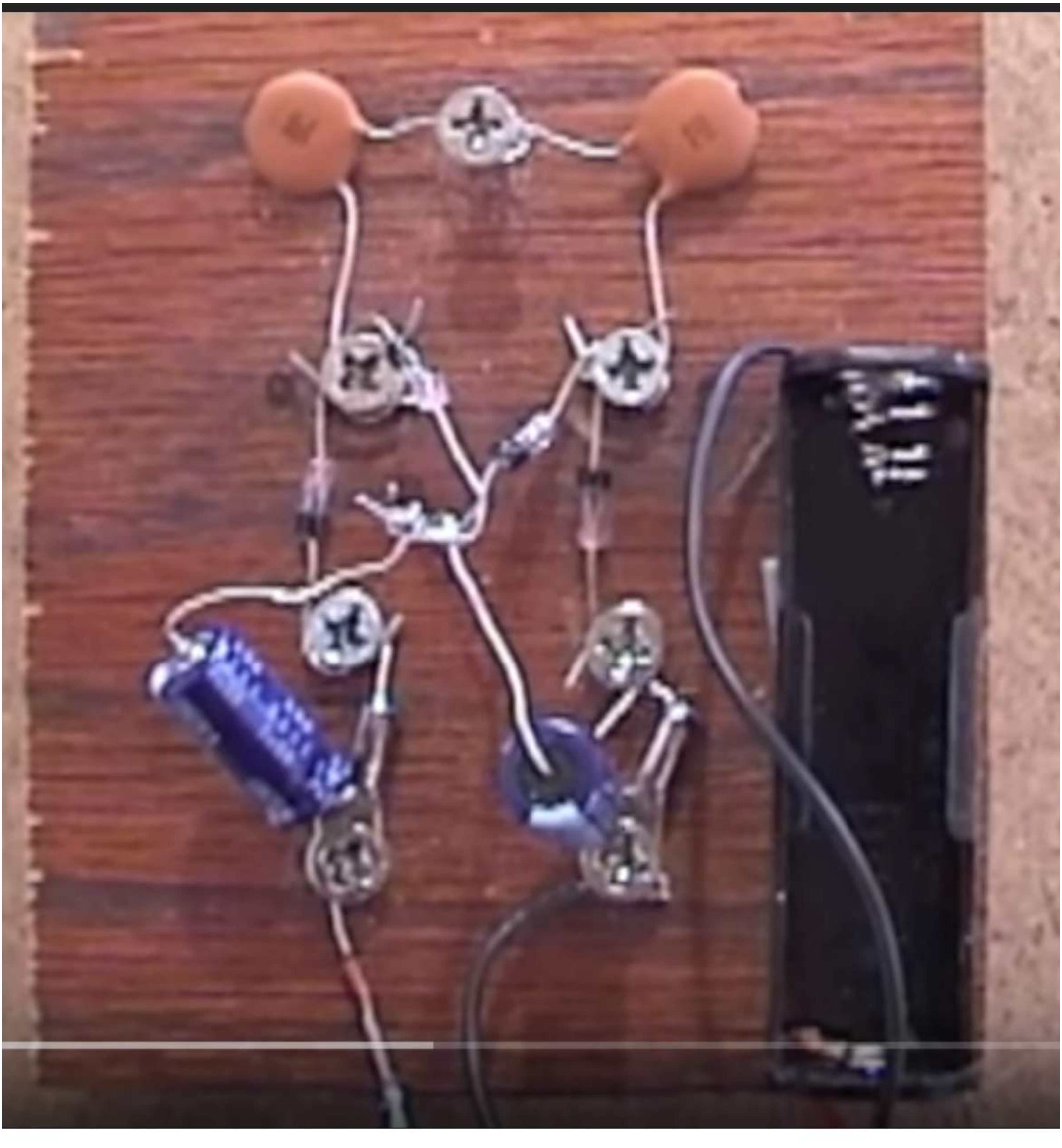
Energy from RF signals

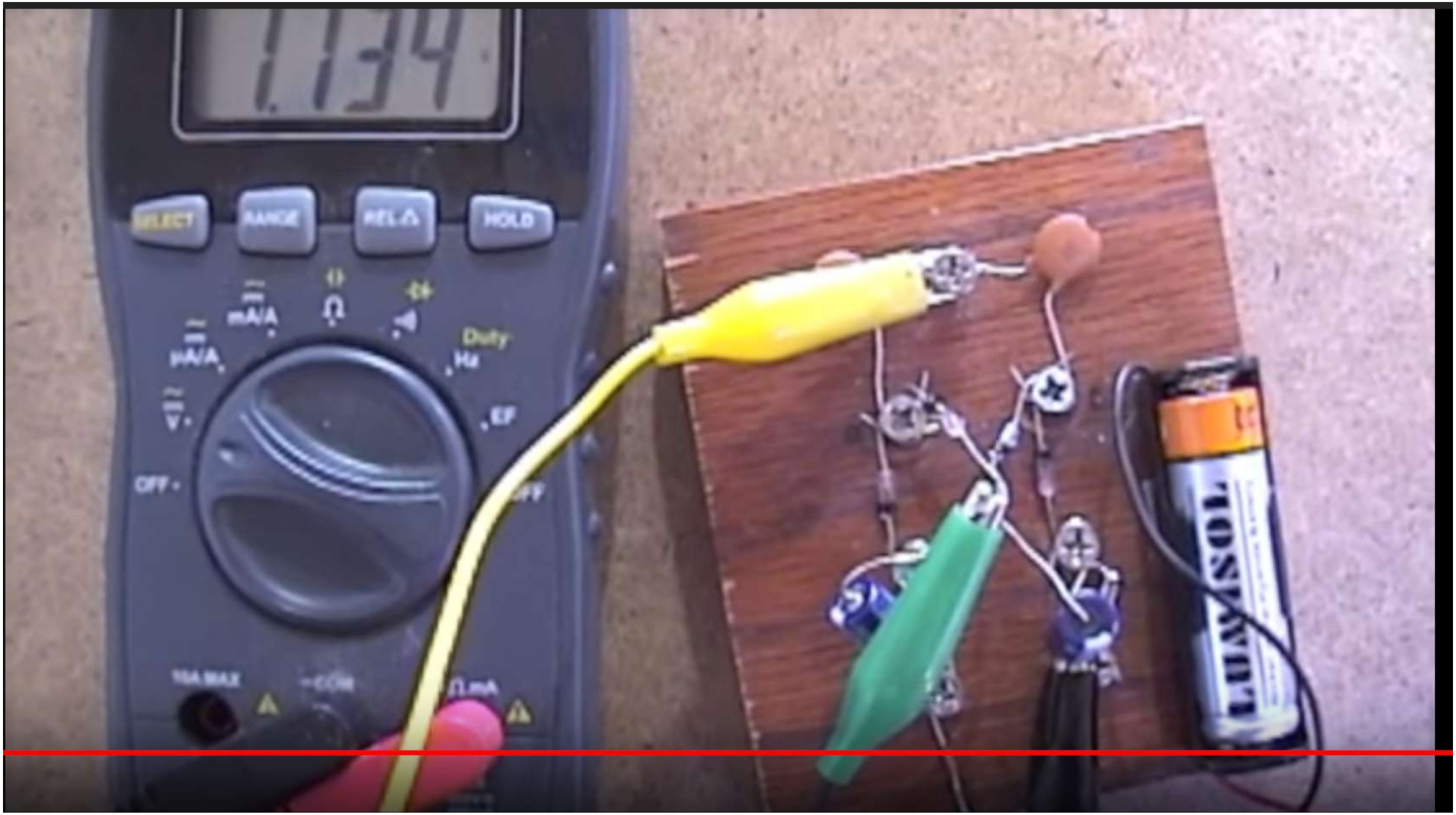


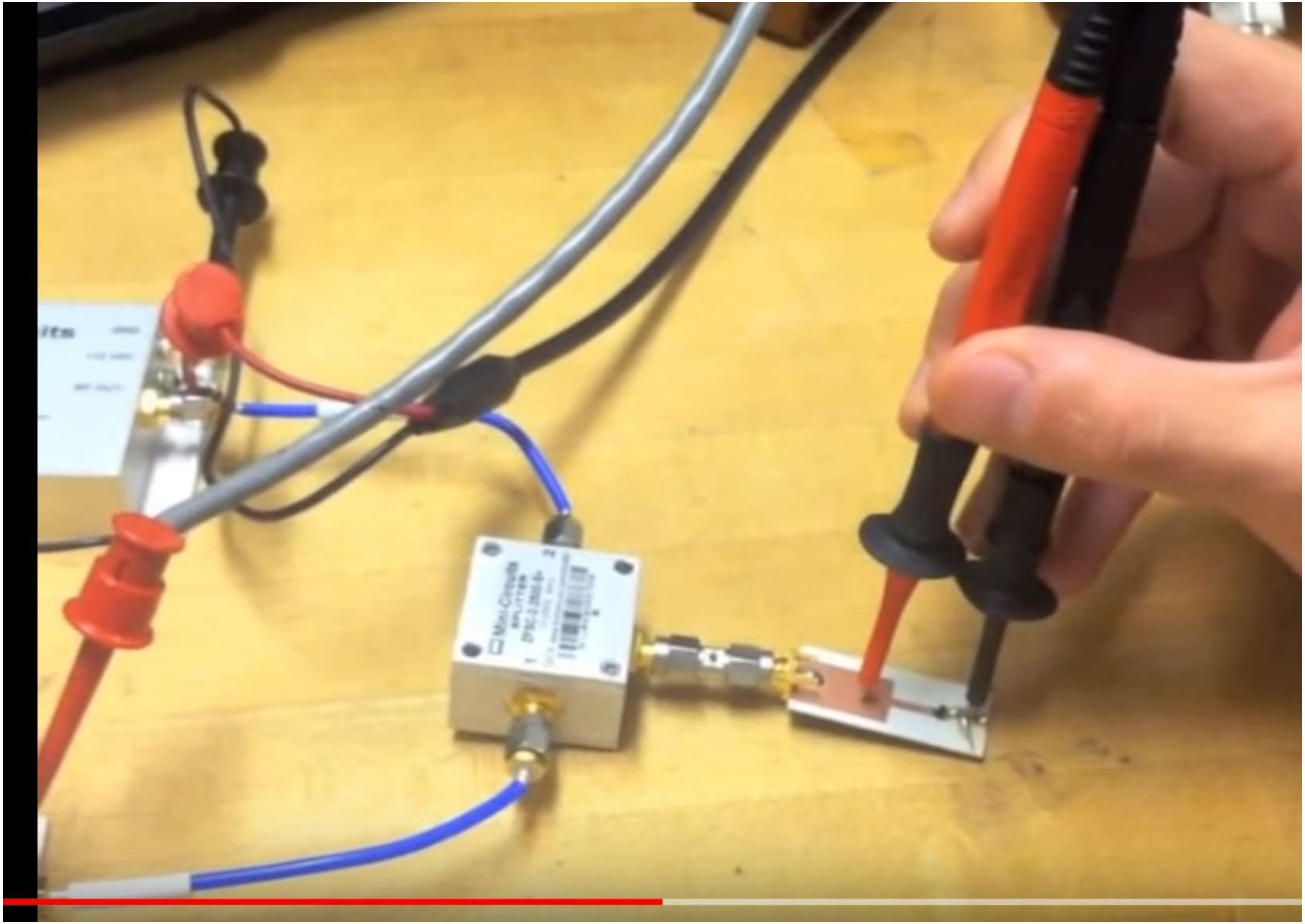
1N34 Germanium Diodes,
100uf 50 v Electrolytic Caps
0.2 uf Ceramic Caps, 1- 3 volts

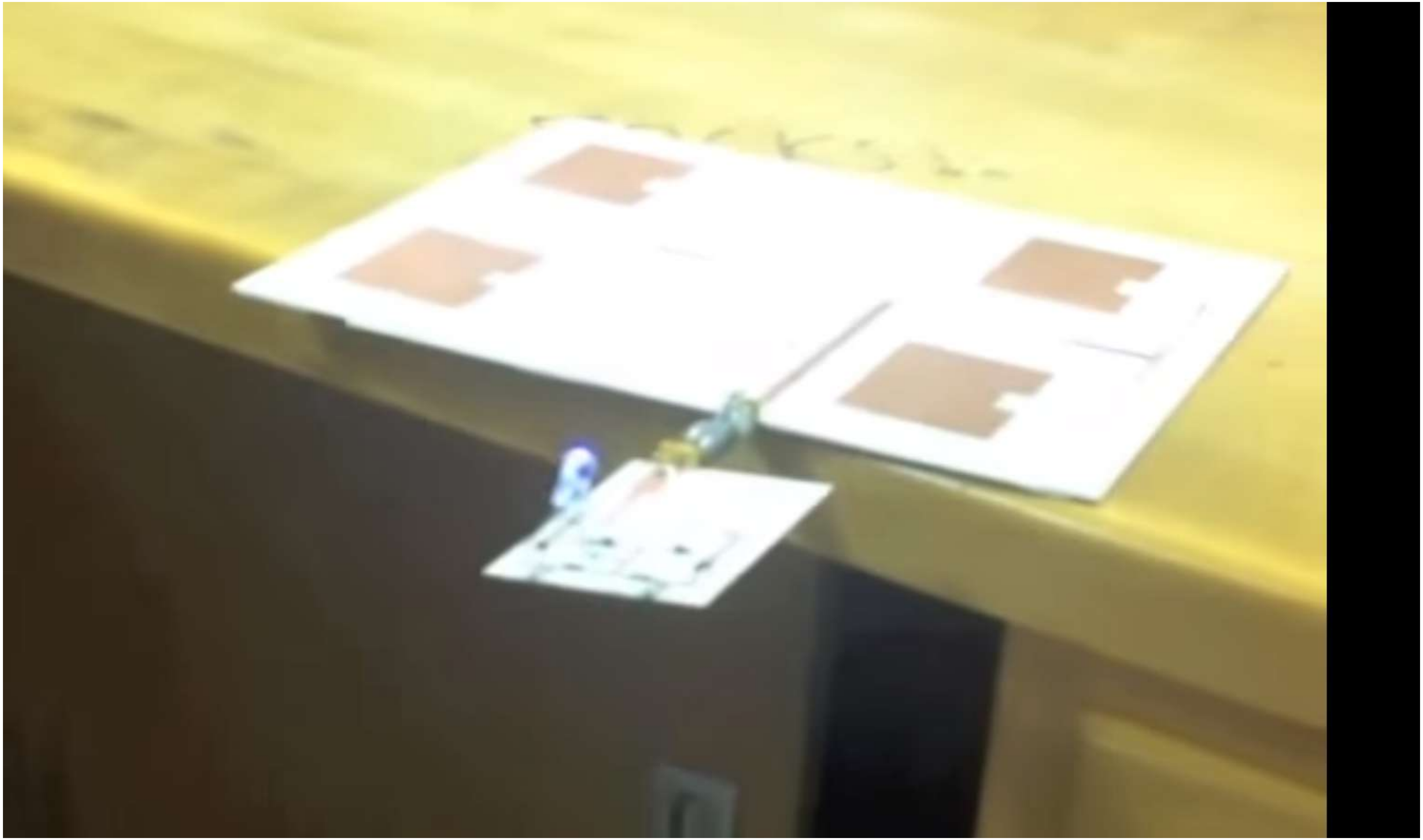

0:06 / 6:02

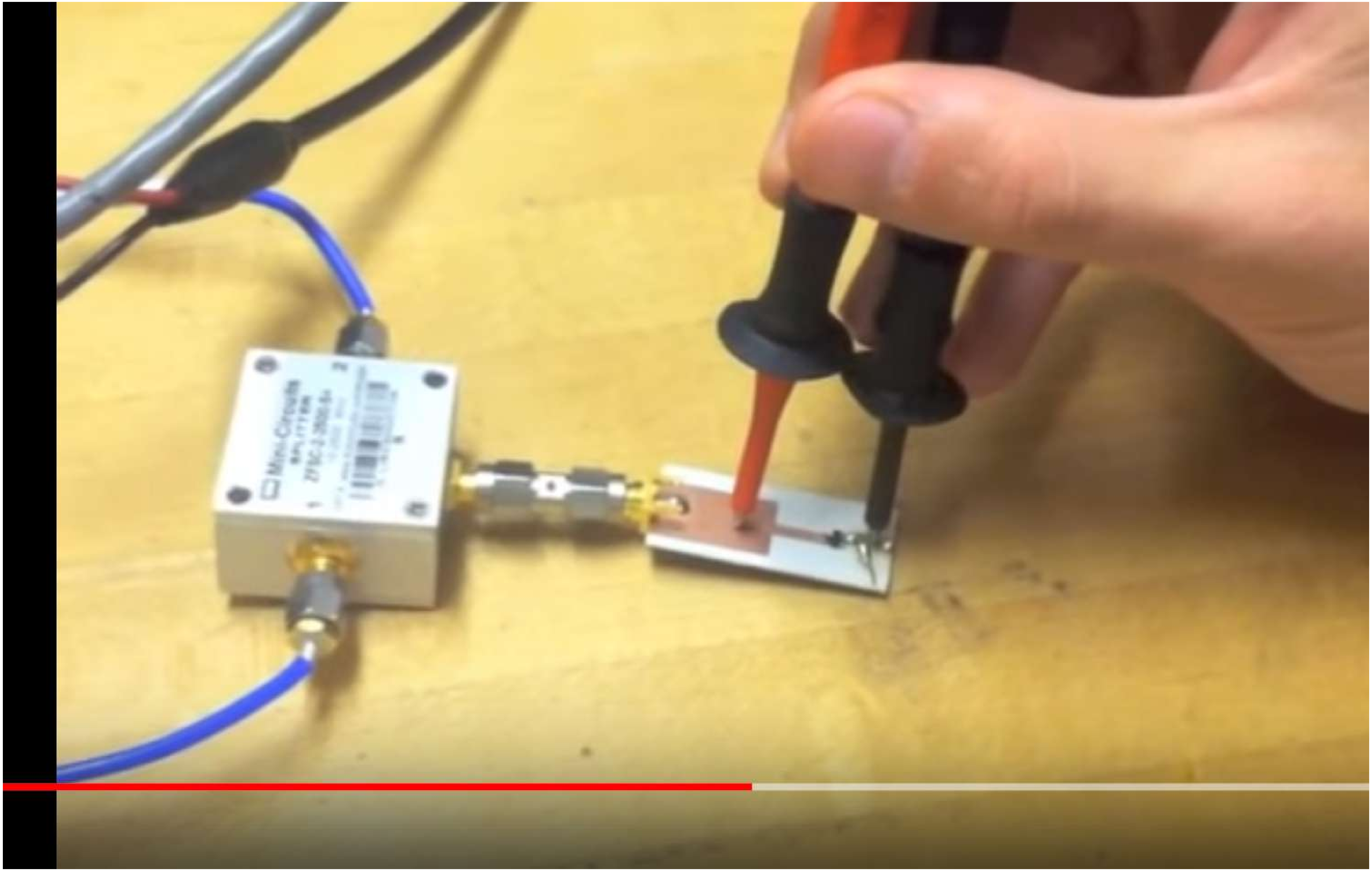

HOLD
Duty
Hz
OFF

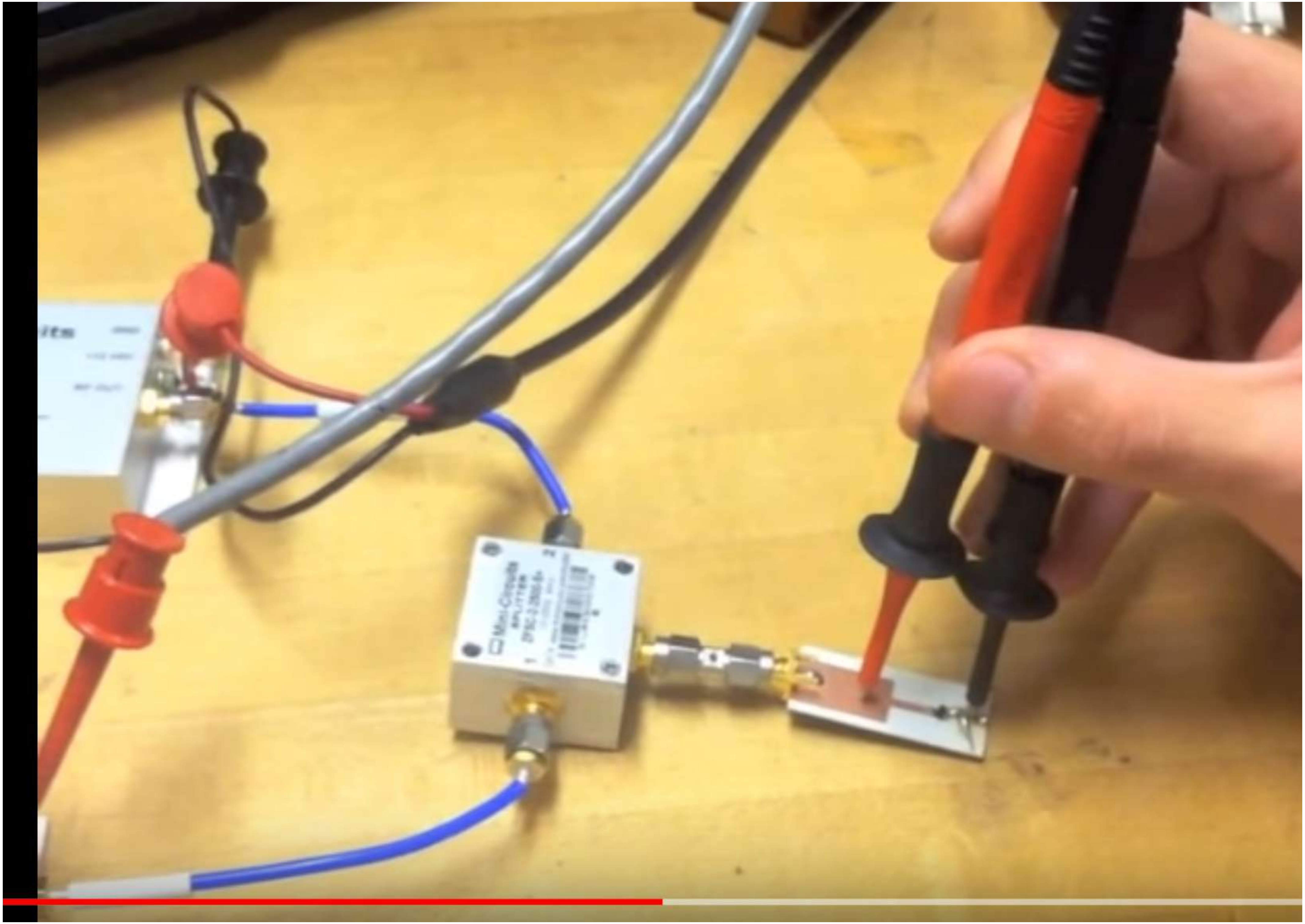


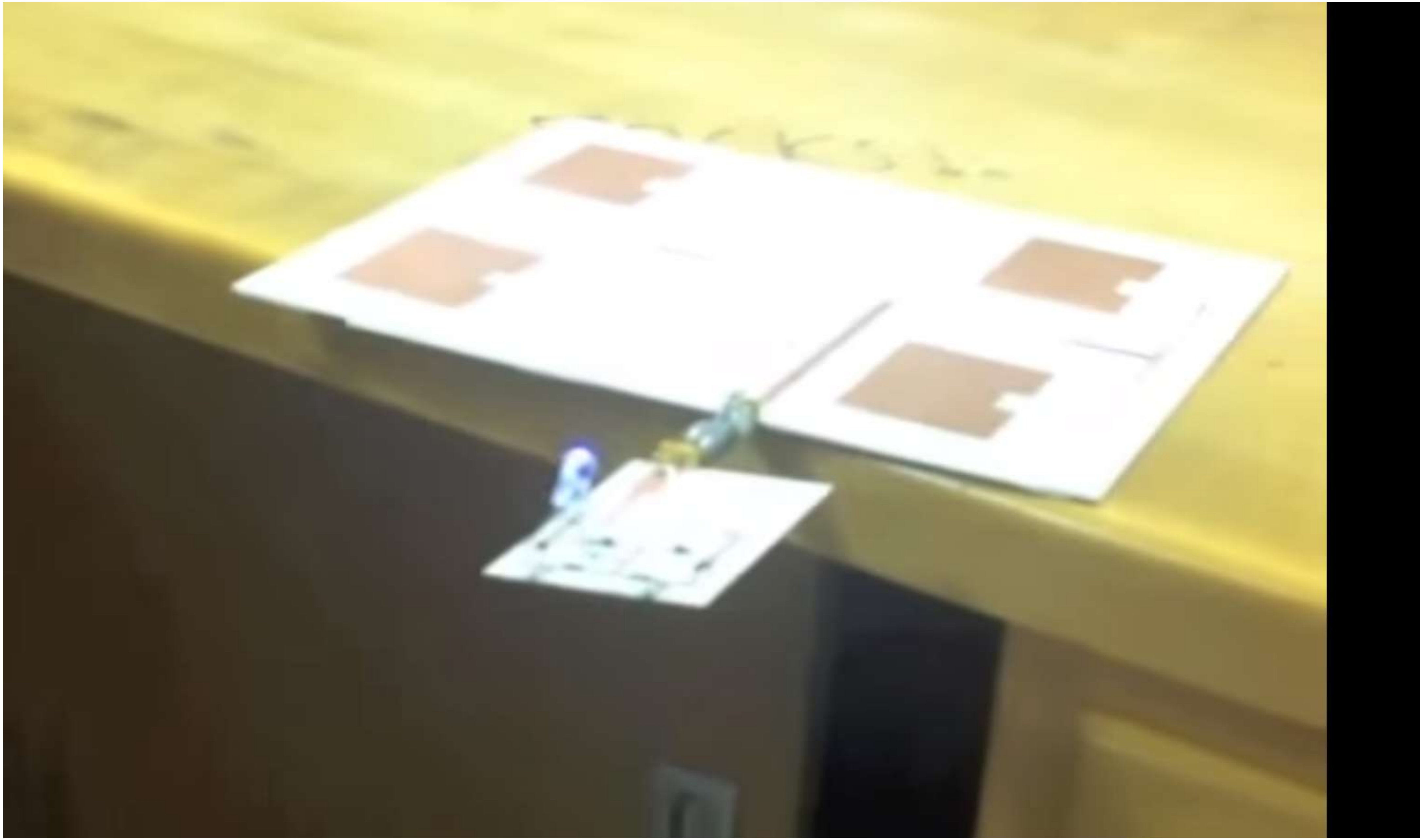

1.134
SELECT
RANGE
REL△
HOLD
mA/A
Ω
Duty
Hz
µA/A
V
EF
OFF
COM
ΩmA
LUXASOL

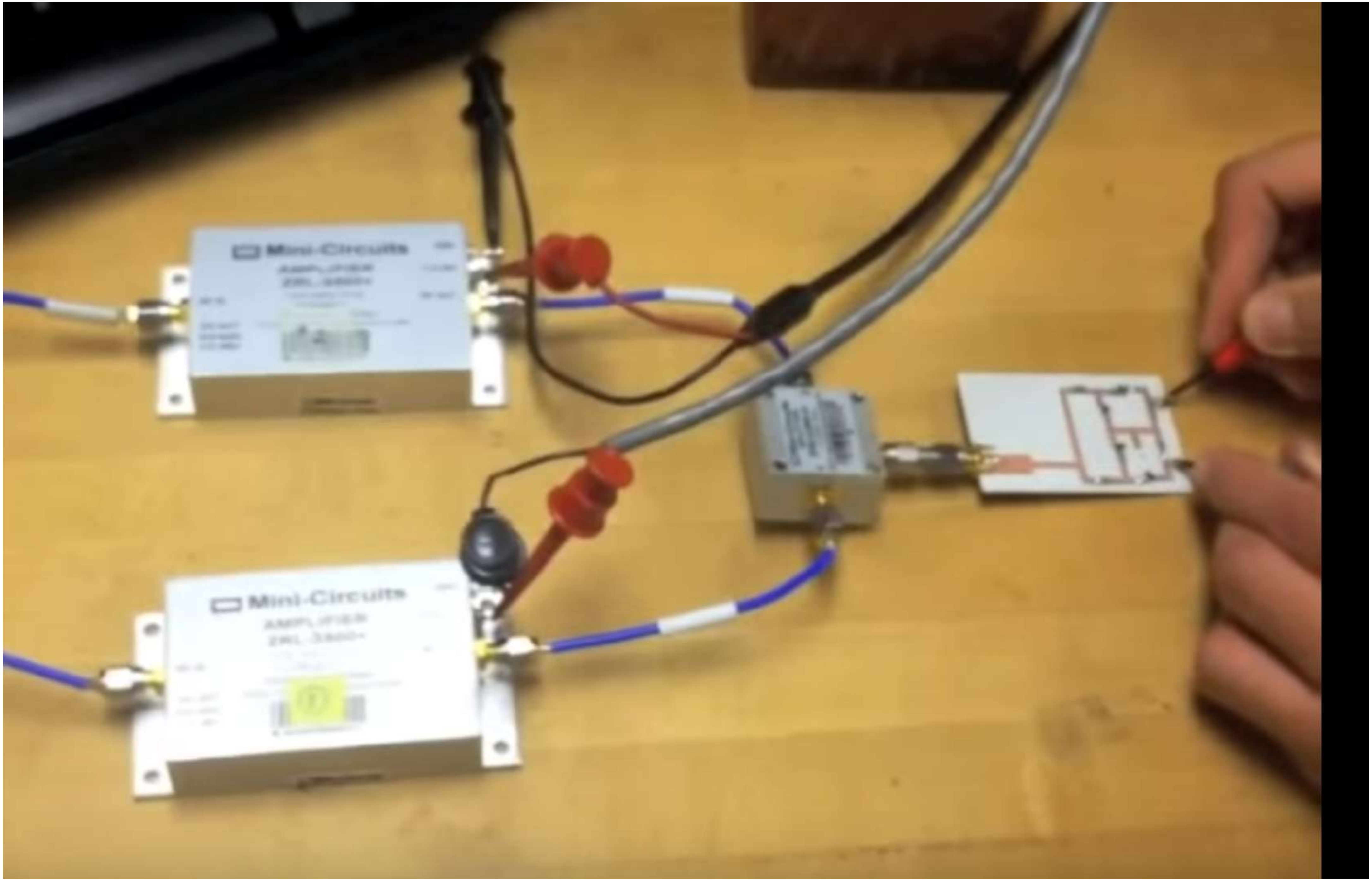


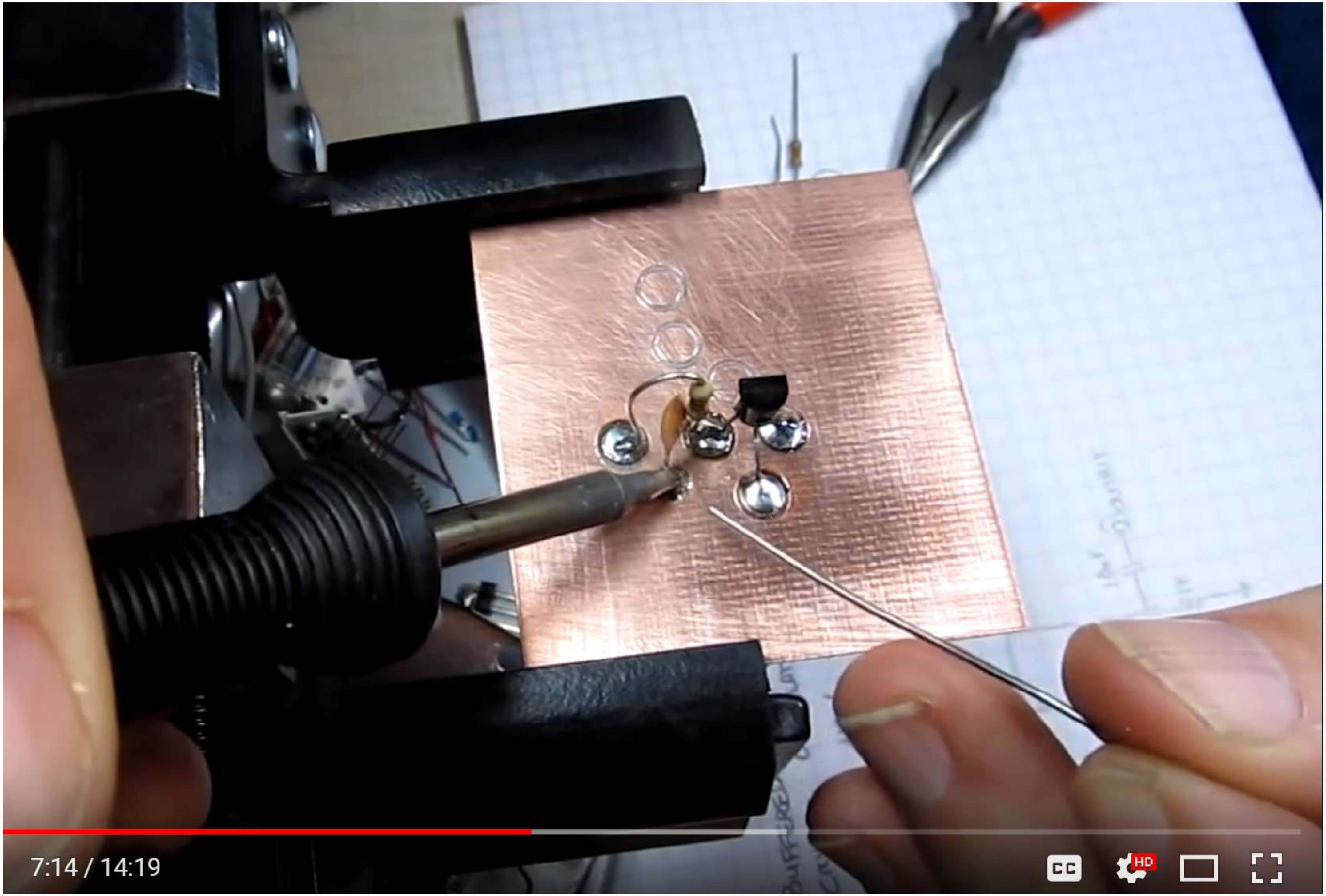


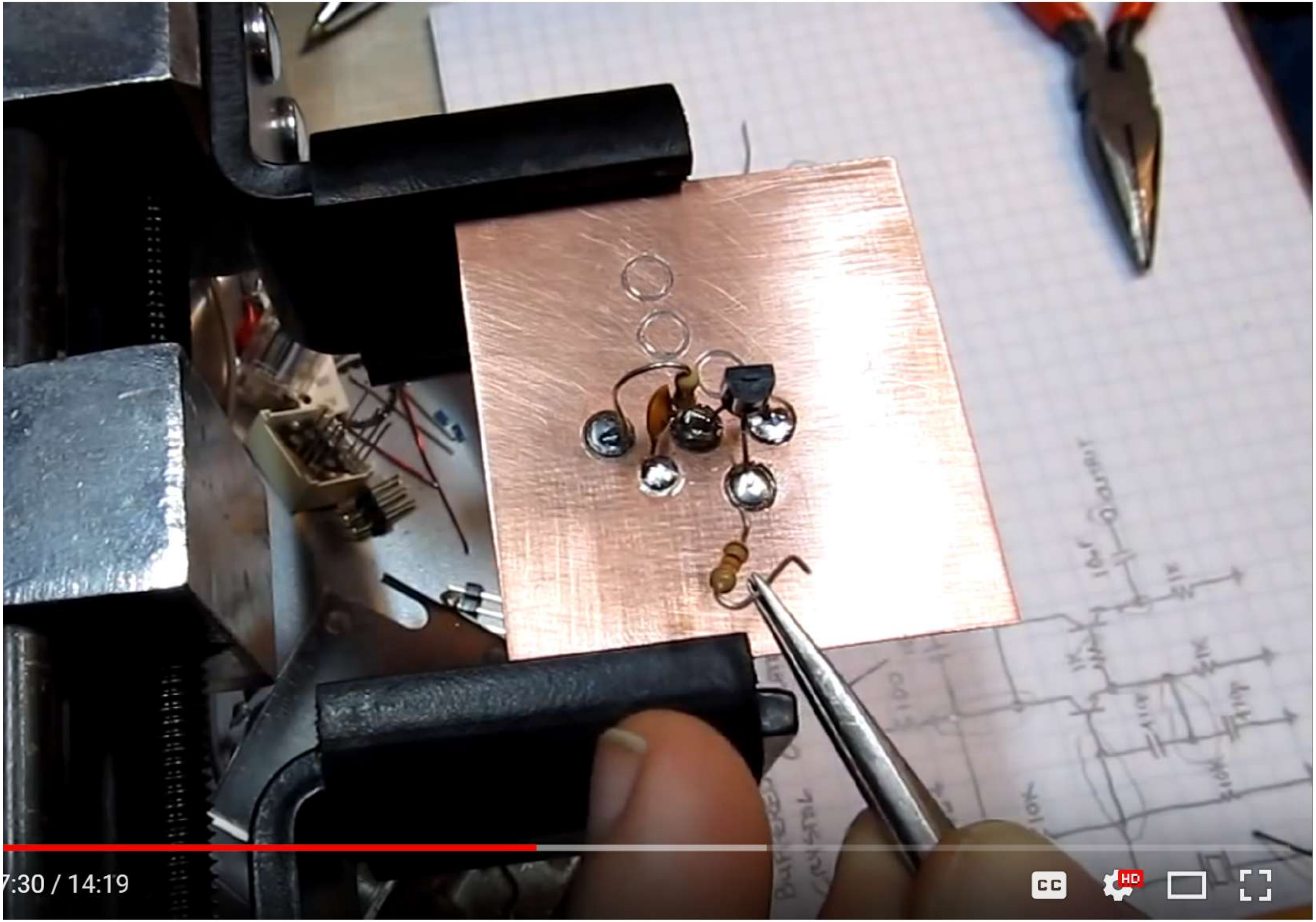

Mini-Circuits



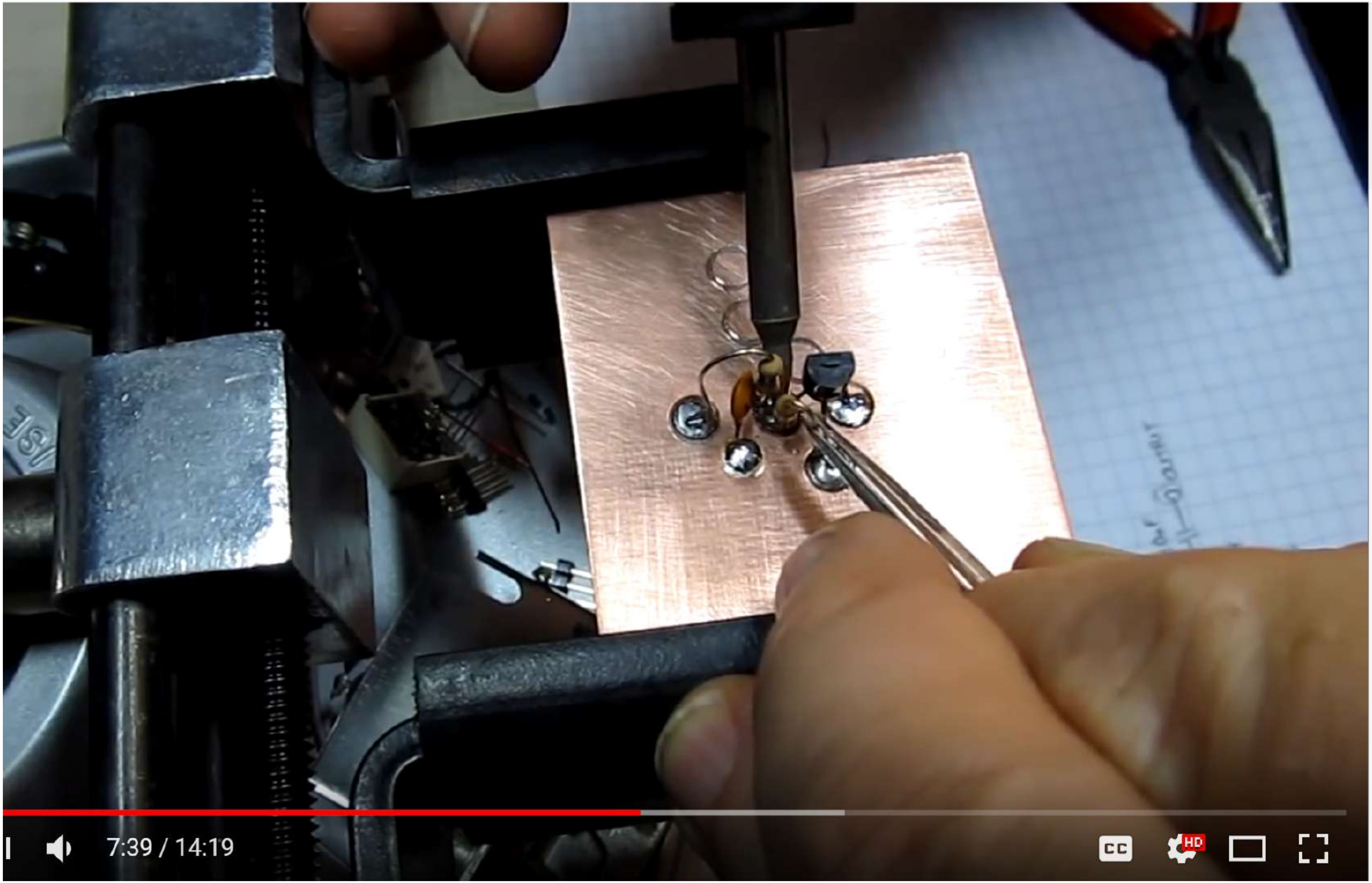


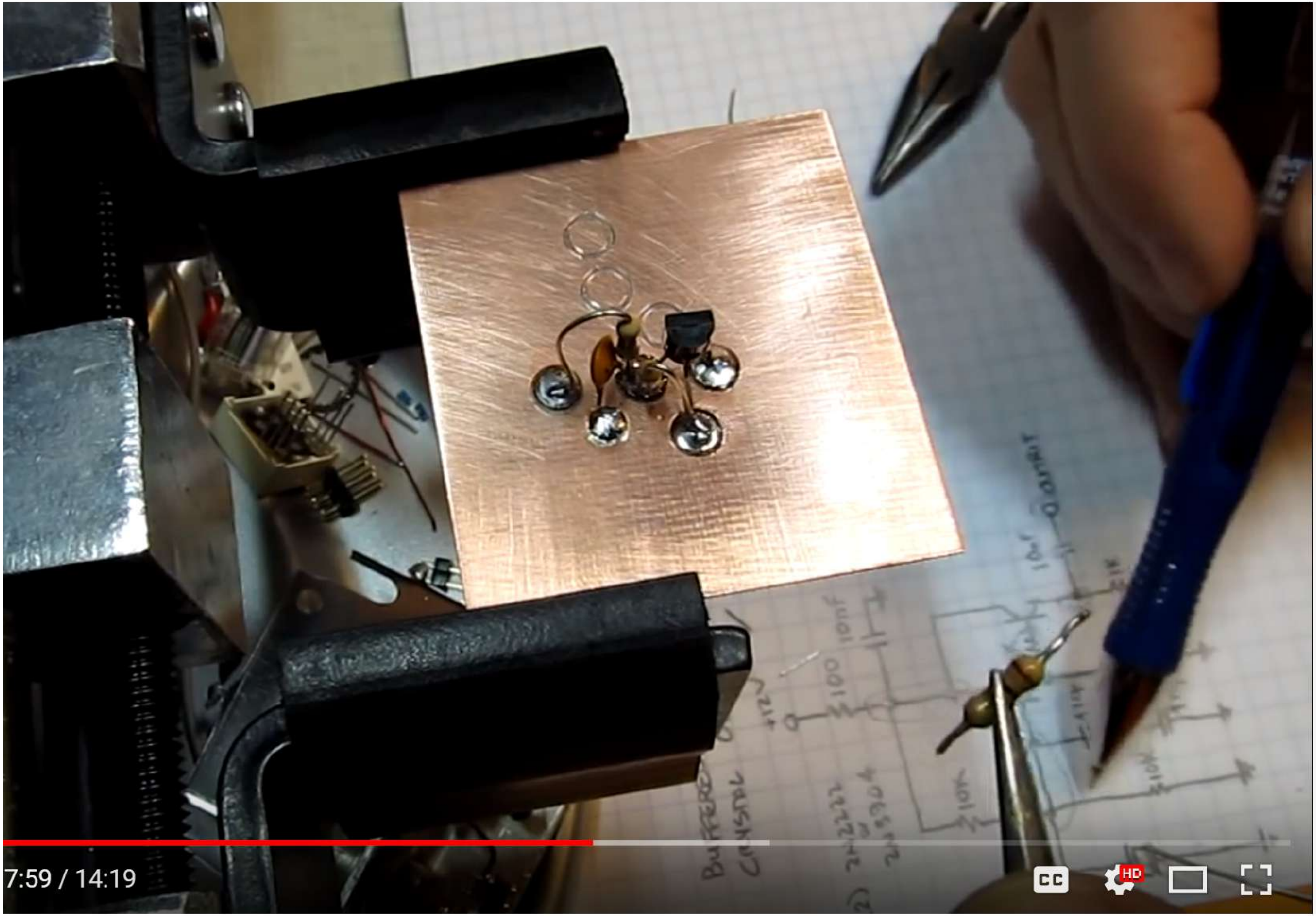

Mini-Circuits
Mini-Circuits

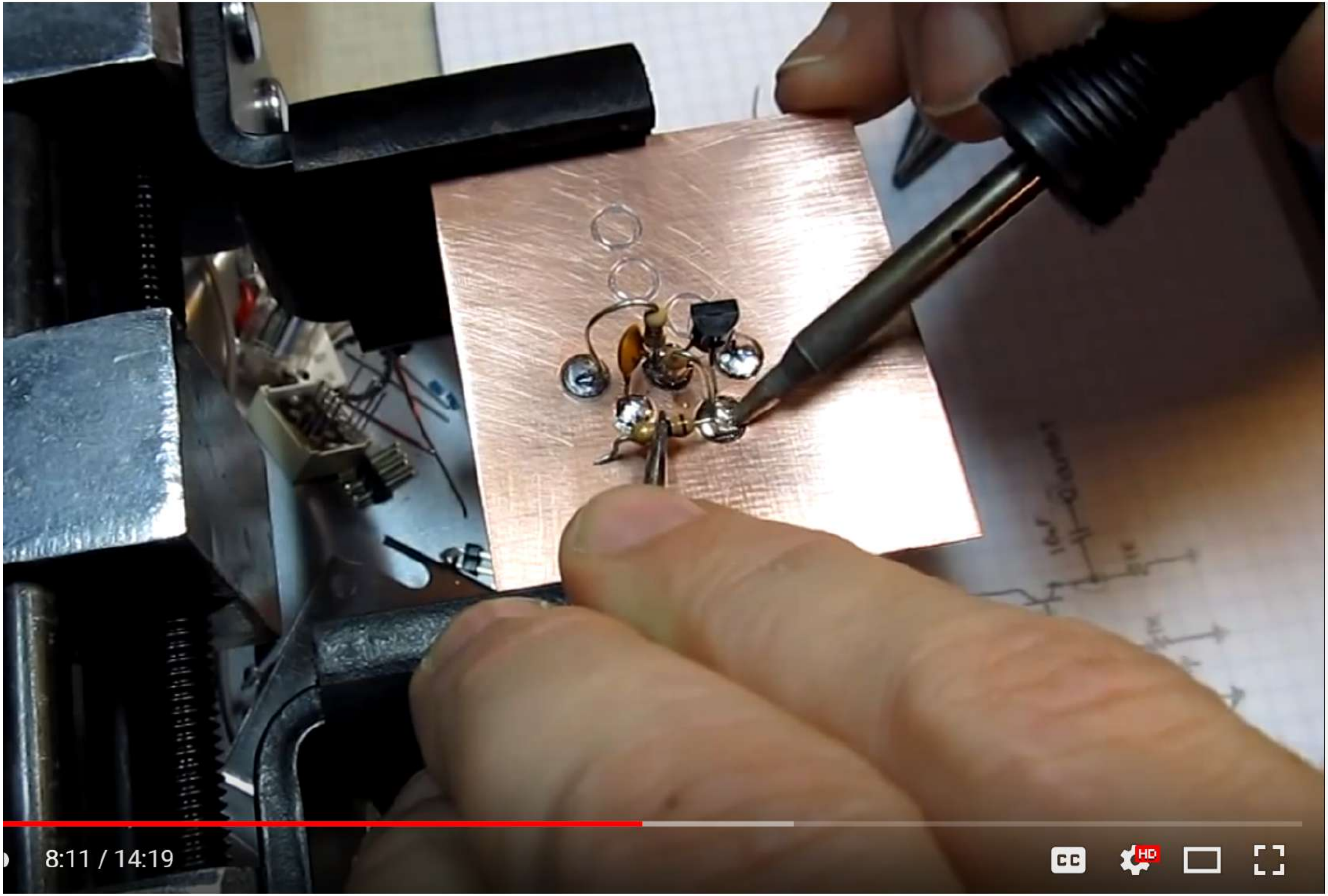

7:14 / 14:19
CC



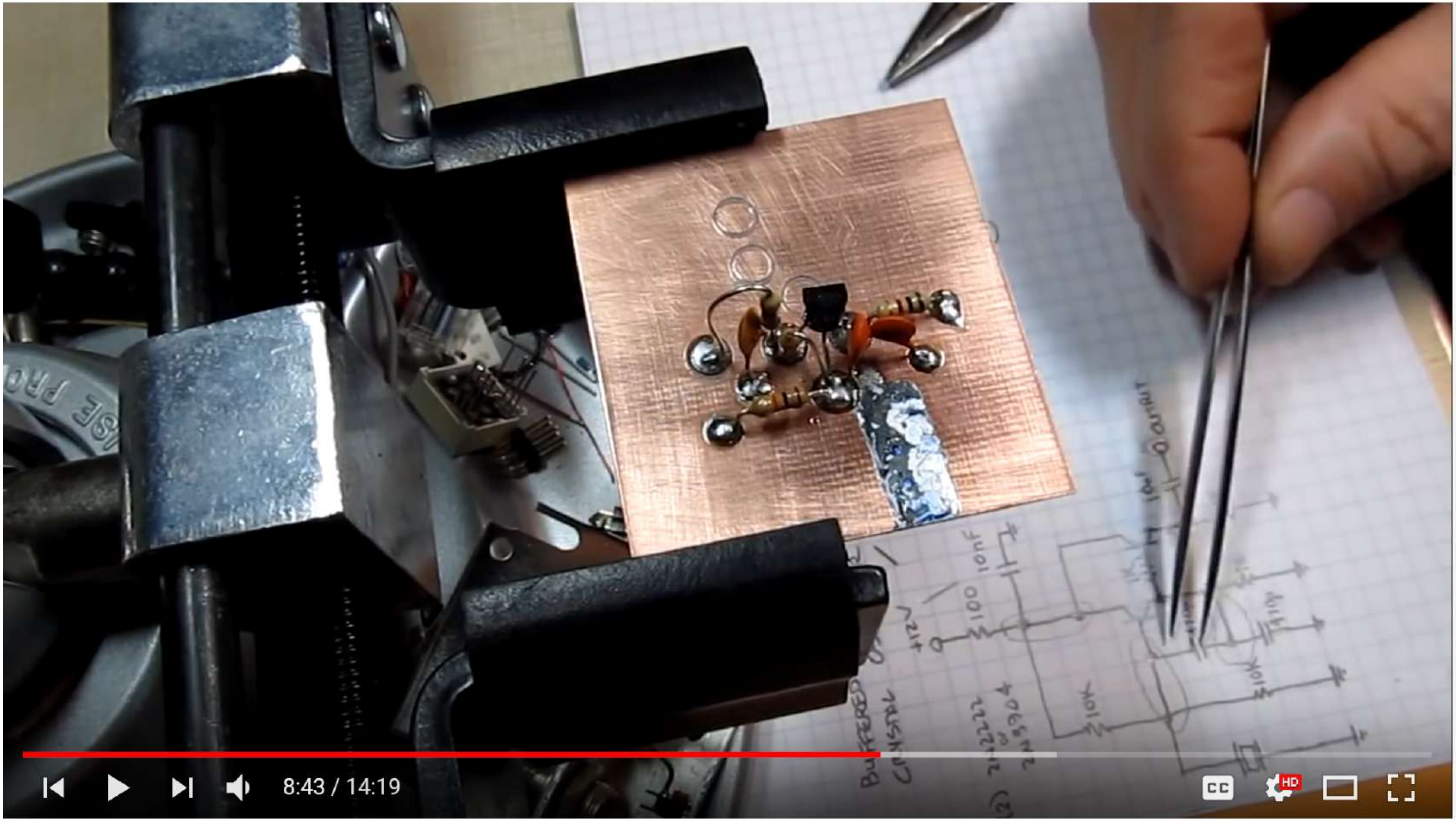
7:30 / 14:19
CC
HD


7:39 / 14:19
HD

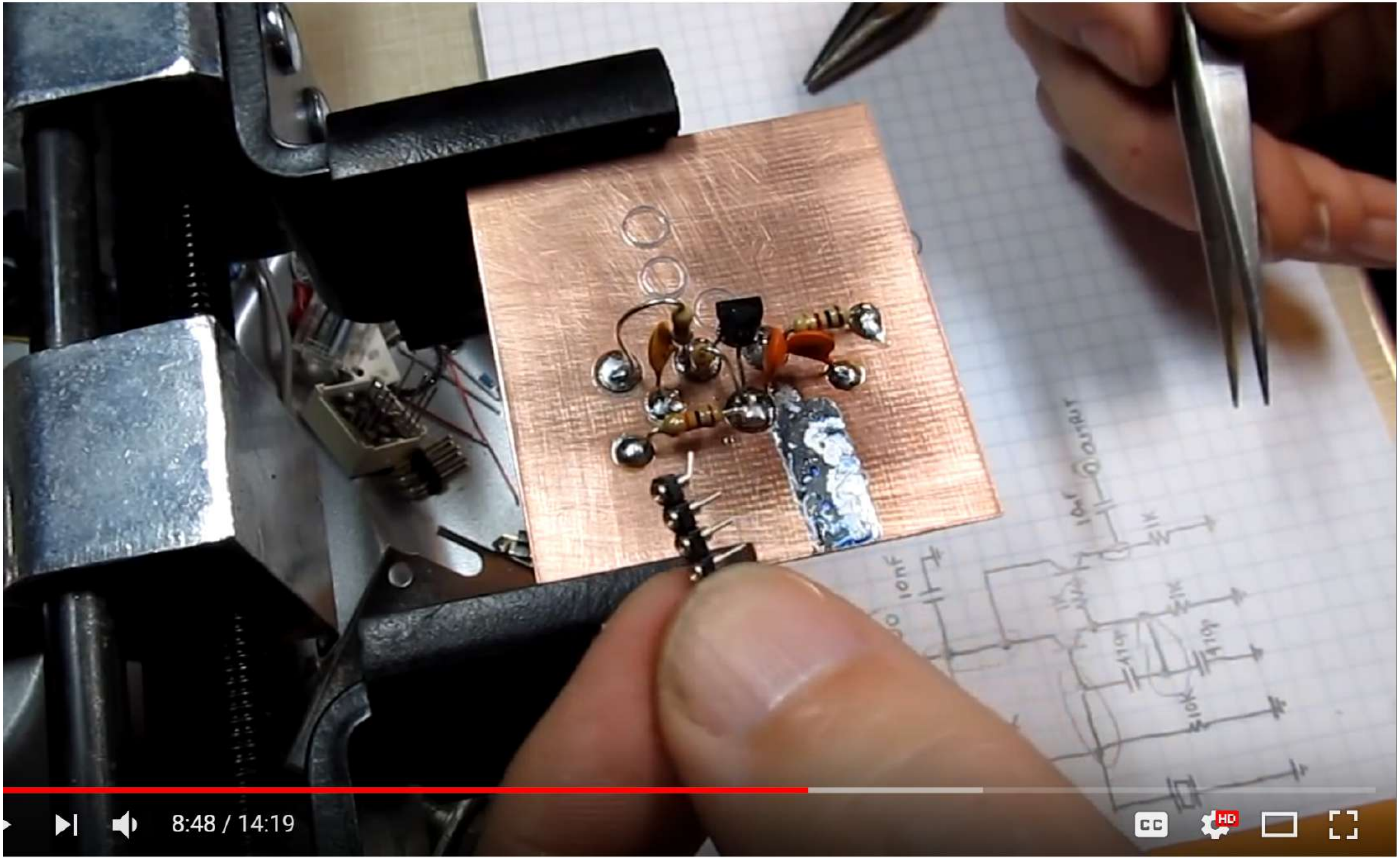

7:59 / 14:19

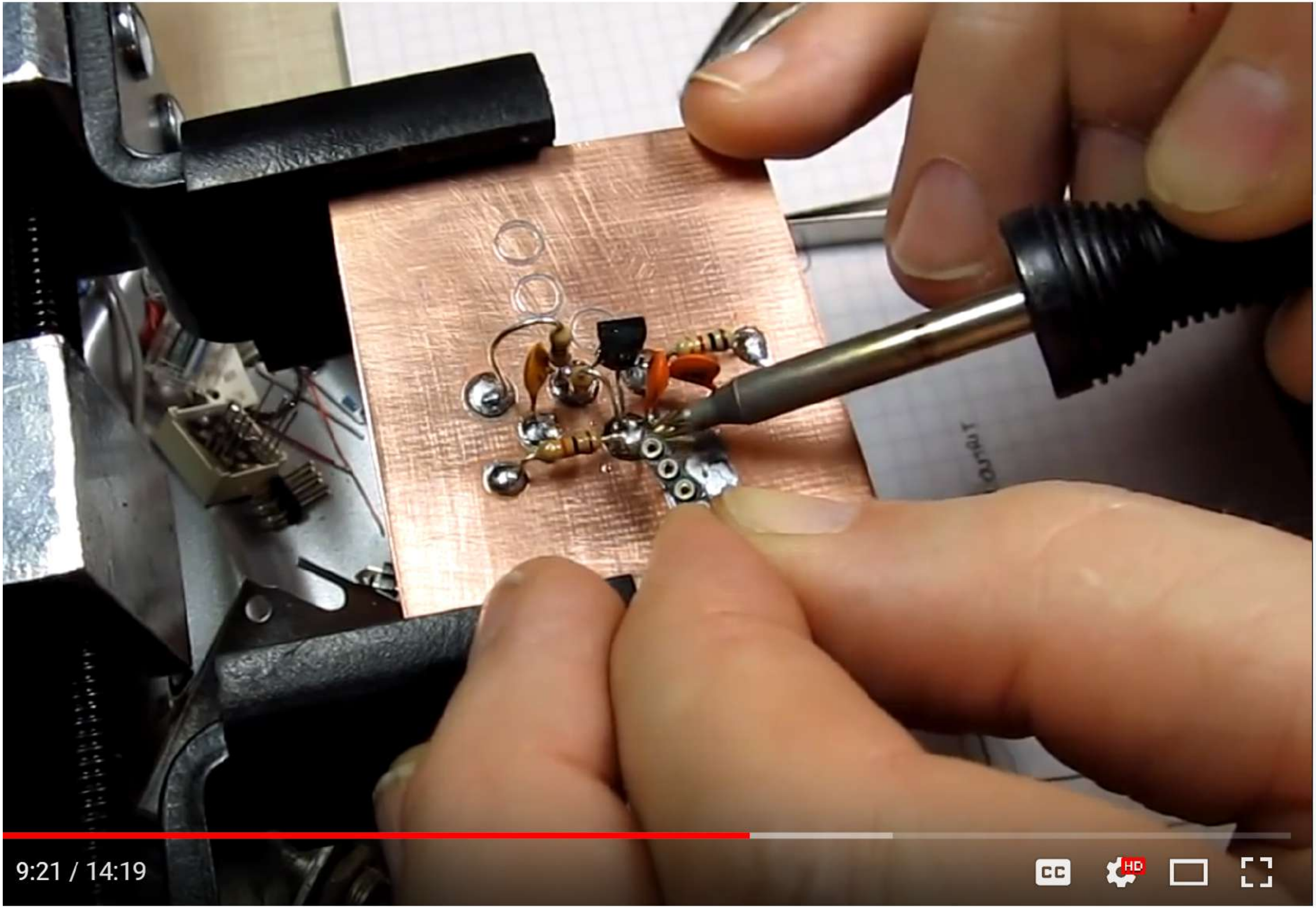

8:11 / 14:19
CC
HD

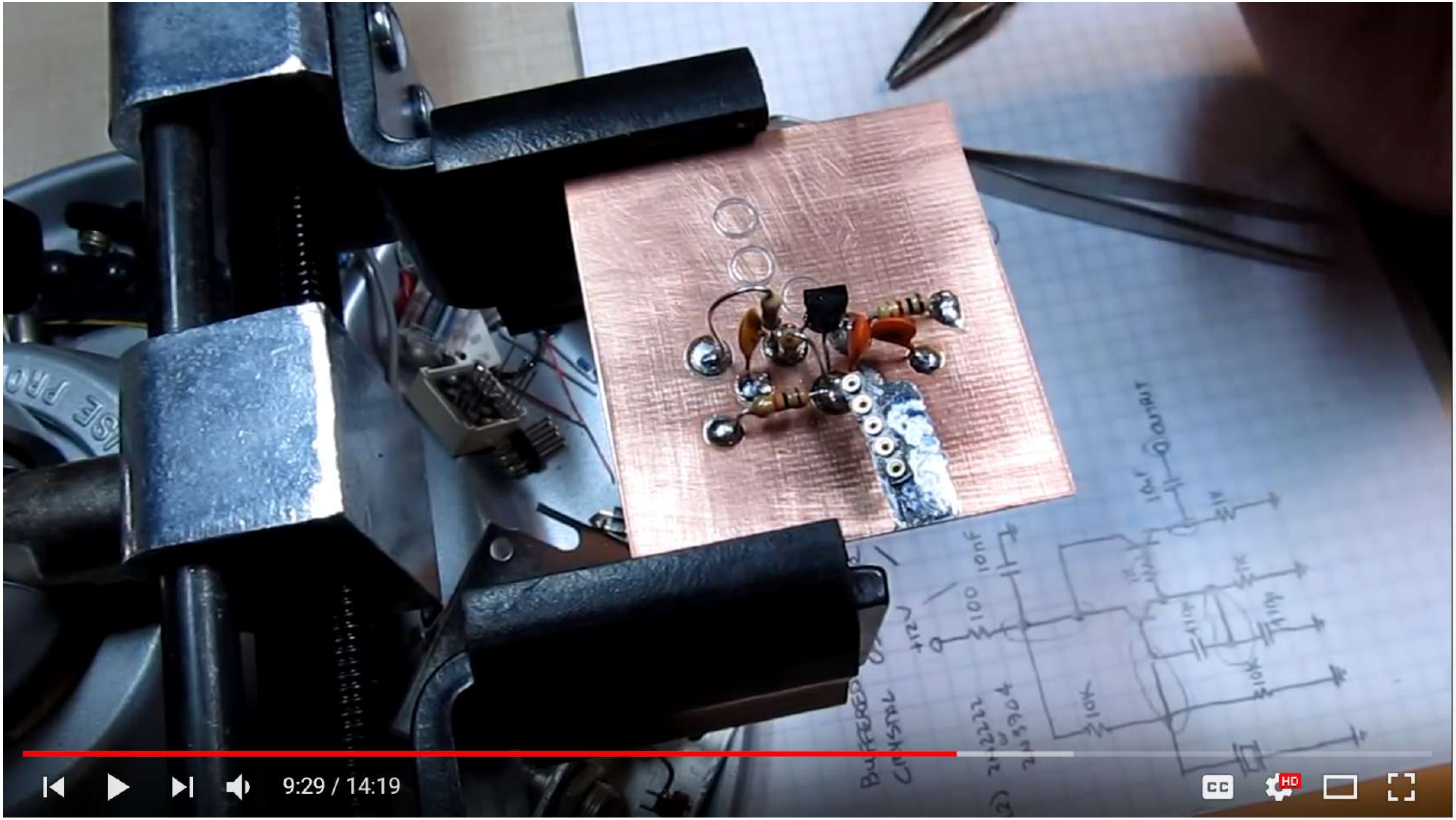

:19
CC
HD

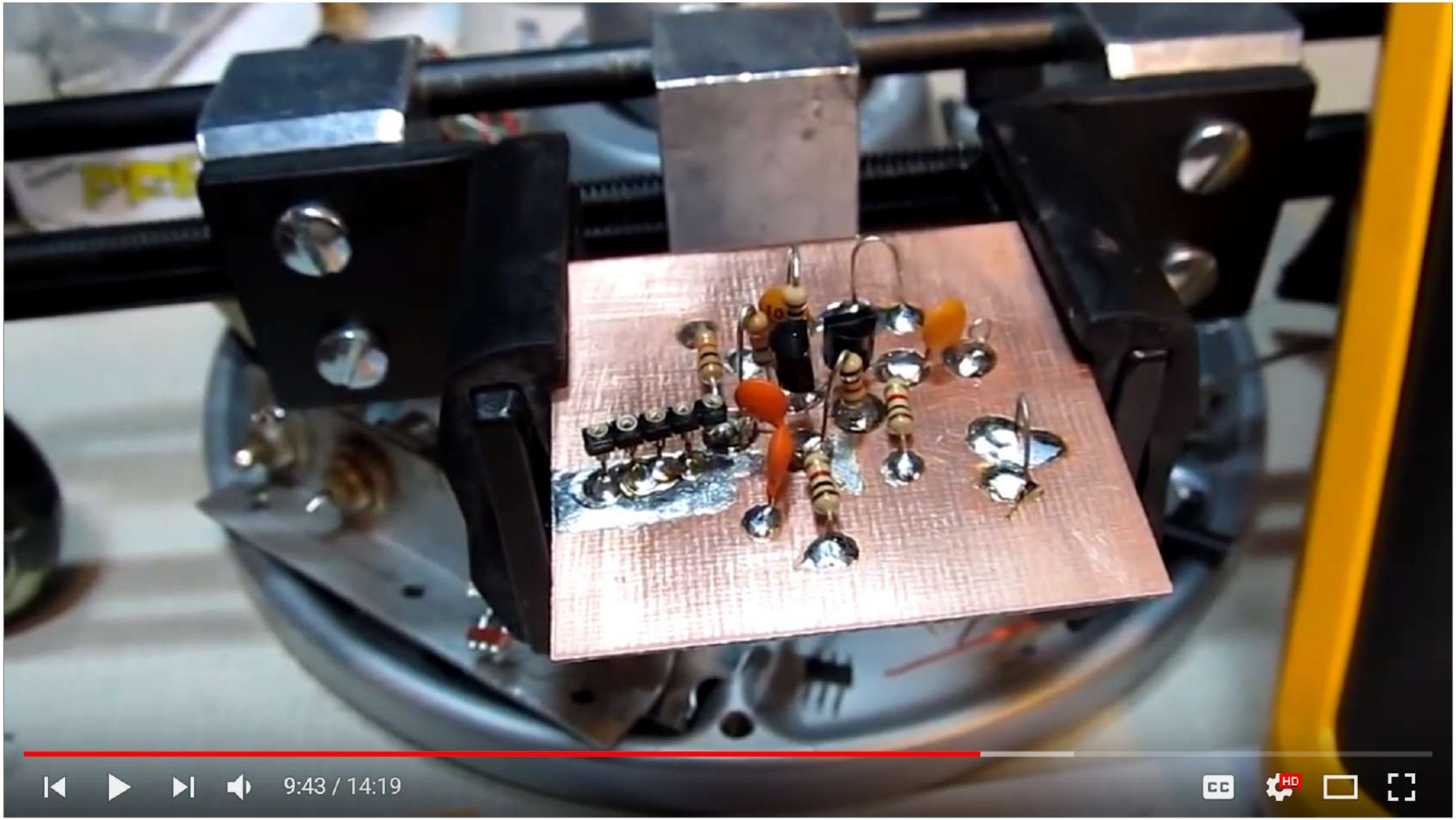


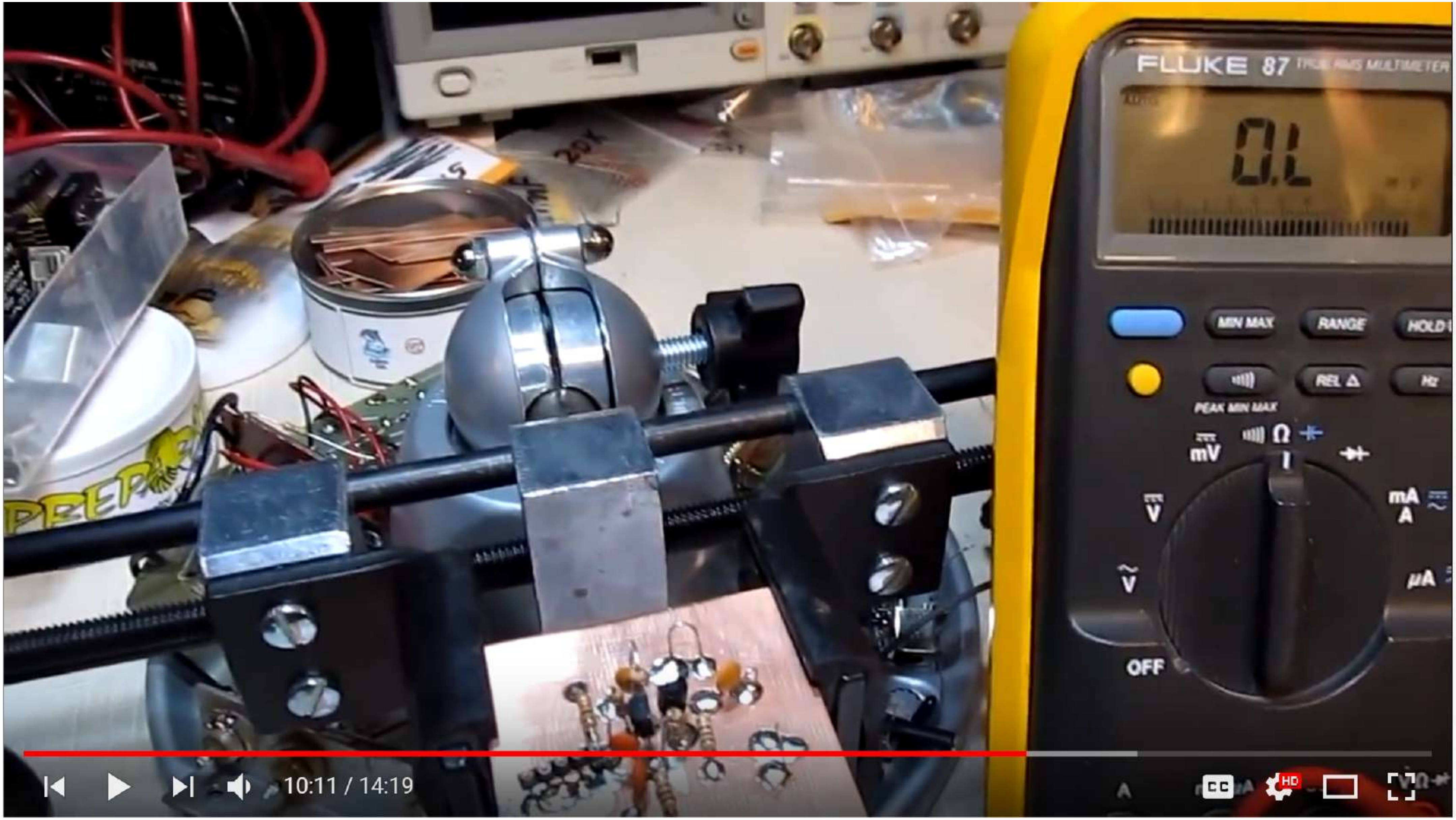
#123: Build a crystal oscillator from schematic thru prototype construction and testing - DIY


8:48 / 14:19
HD

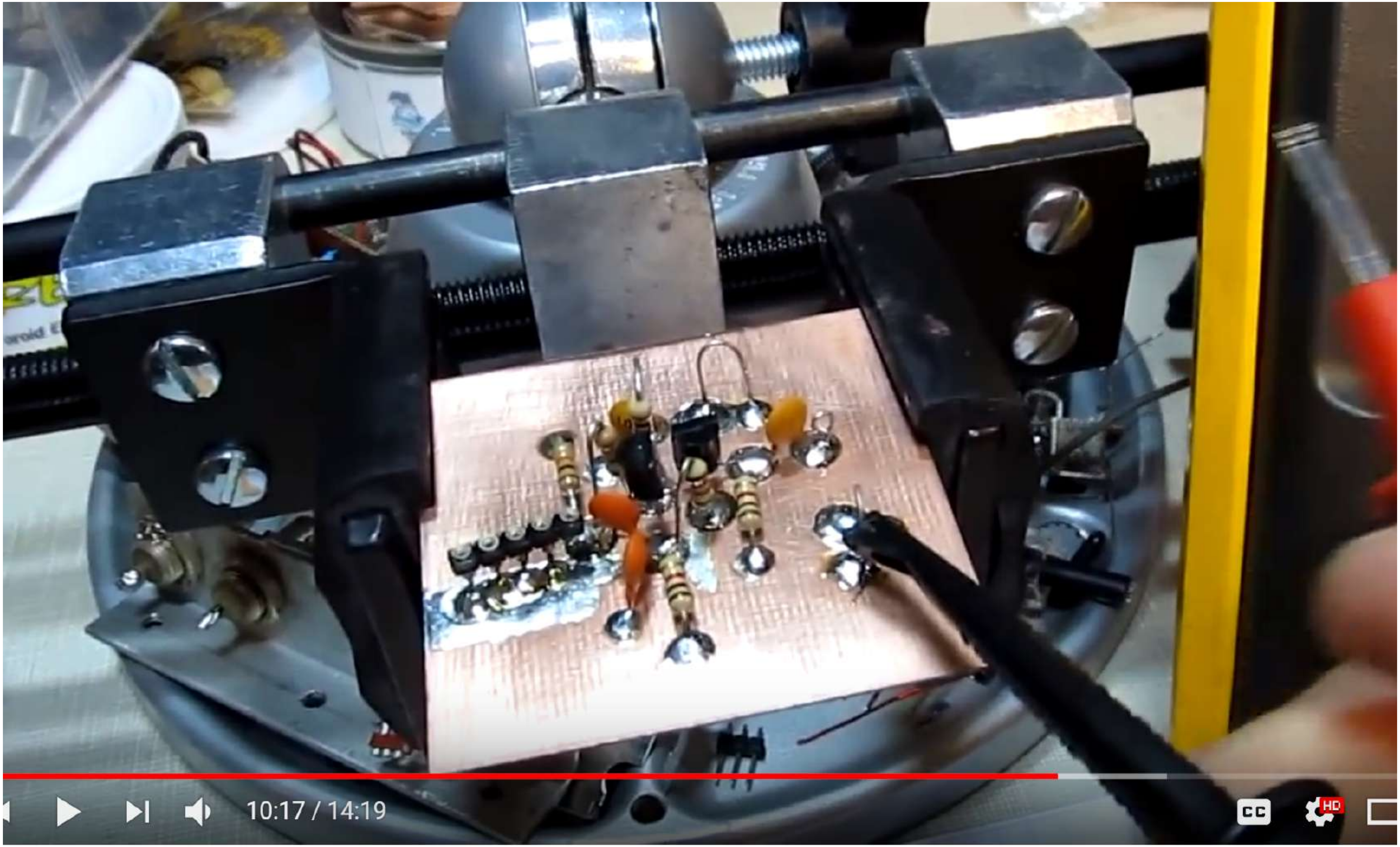

9:21 / 14:19
CC
HD

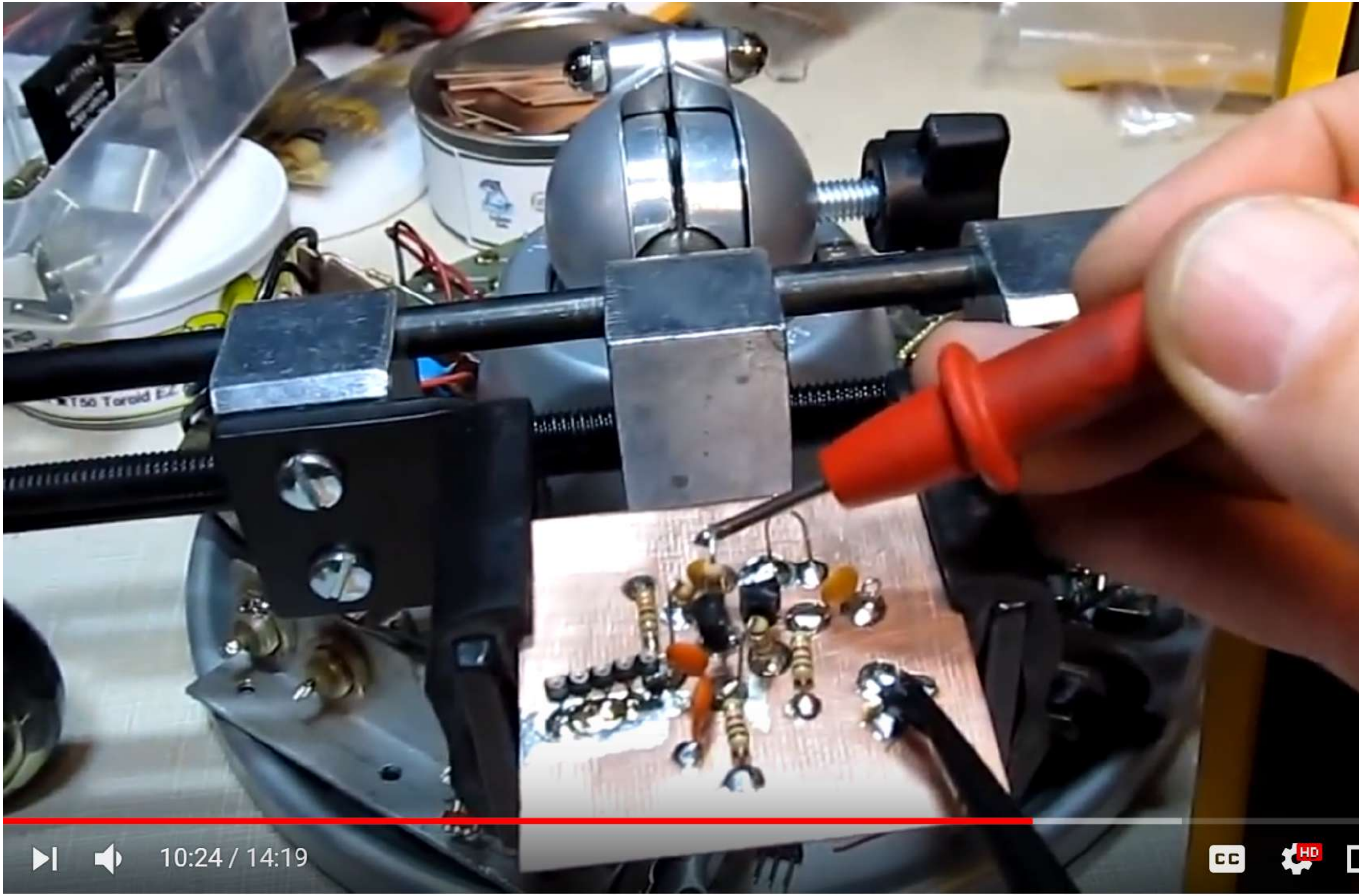

HD
9:29 / 14:19


9:43 / 14:19
HD

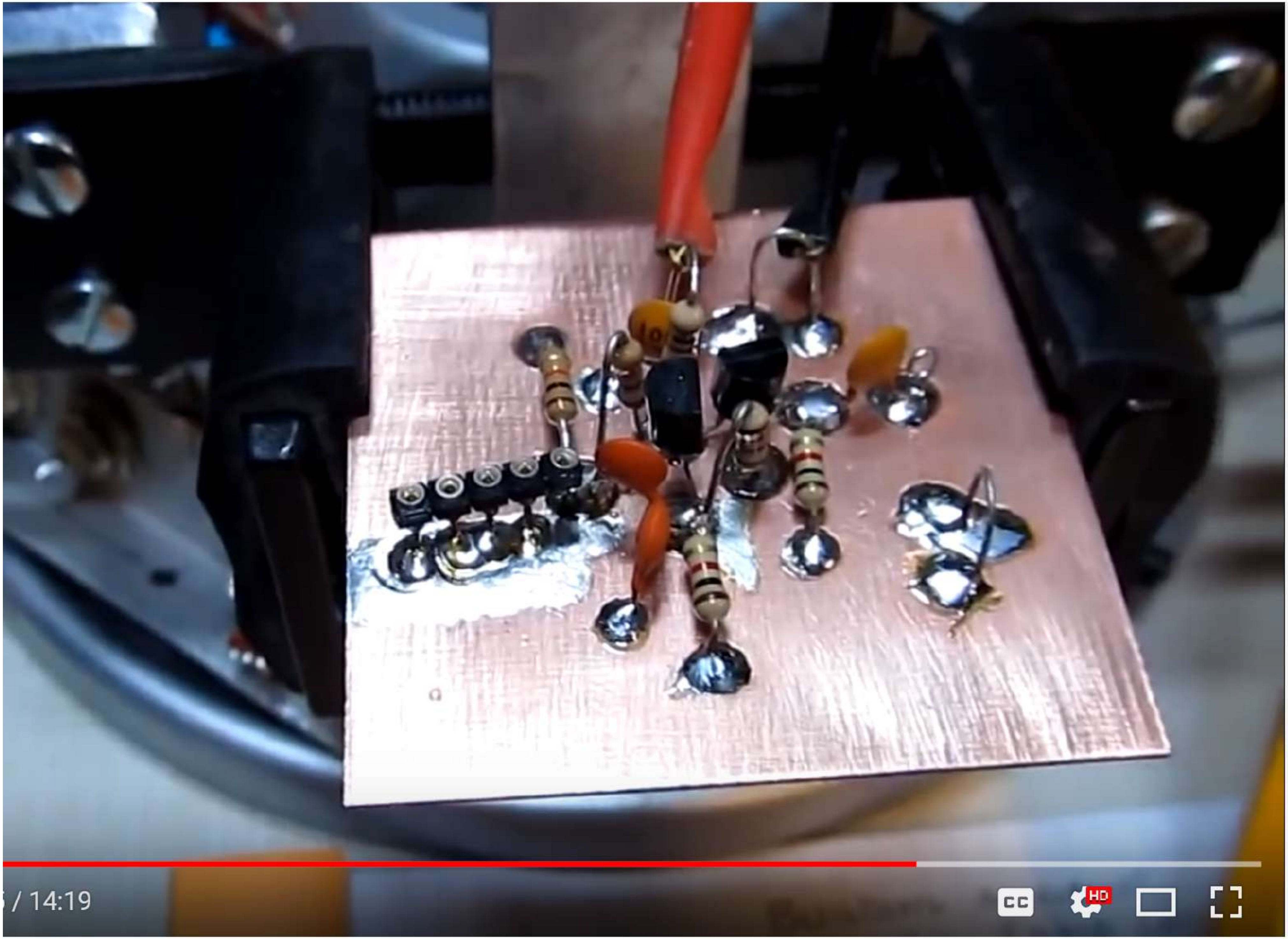


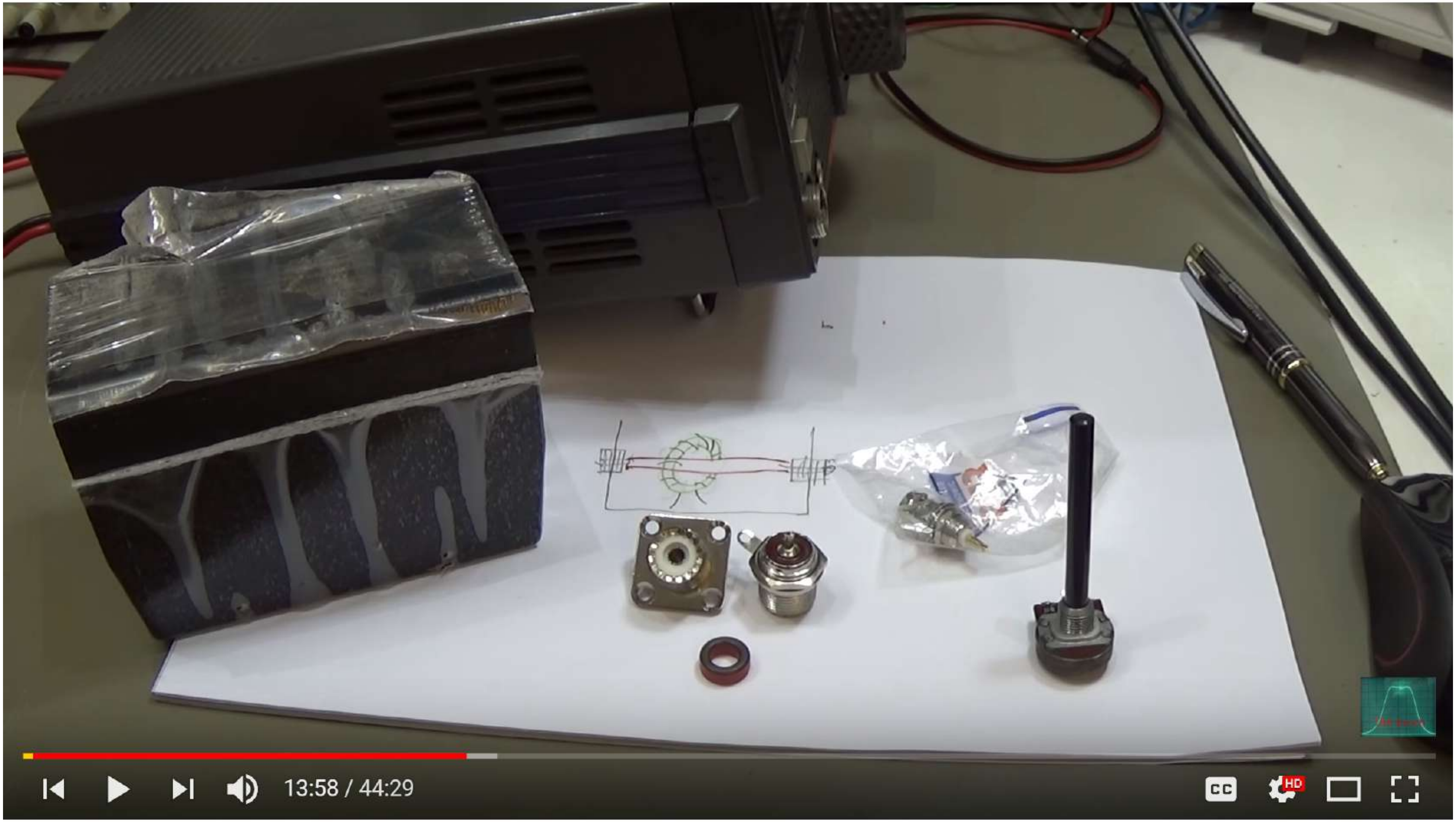
FLUKE 87
0.L
MIN MAX
RANGE
REL Δ
Hz
PEAK MIN MAX
mV
mA
A
μA
OFF
10:11 / 14:19


10:17 / 14:19

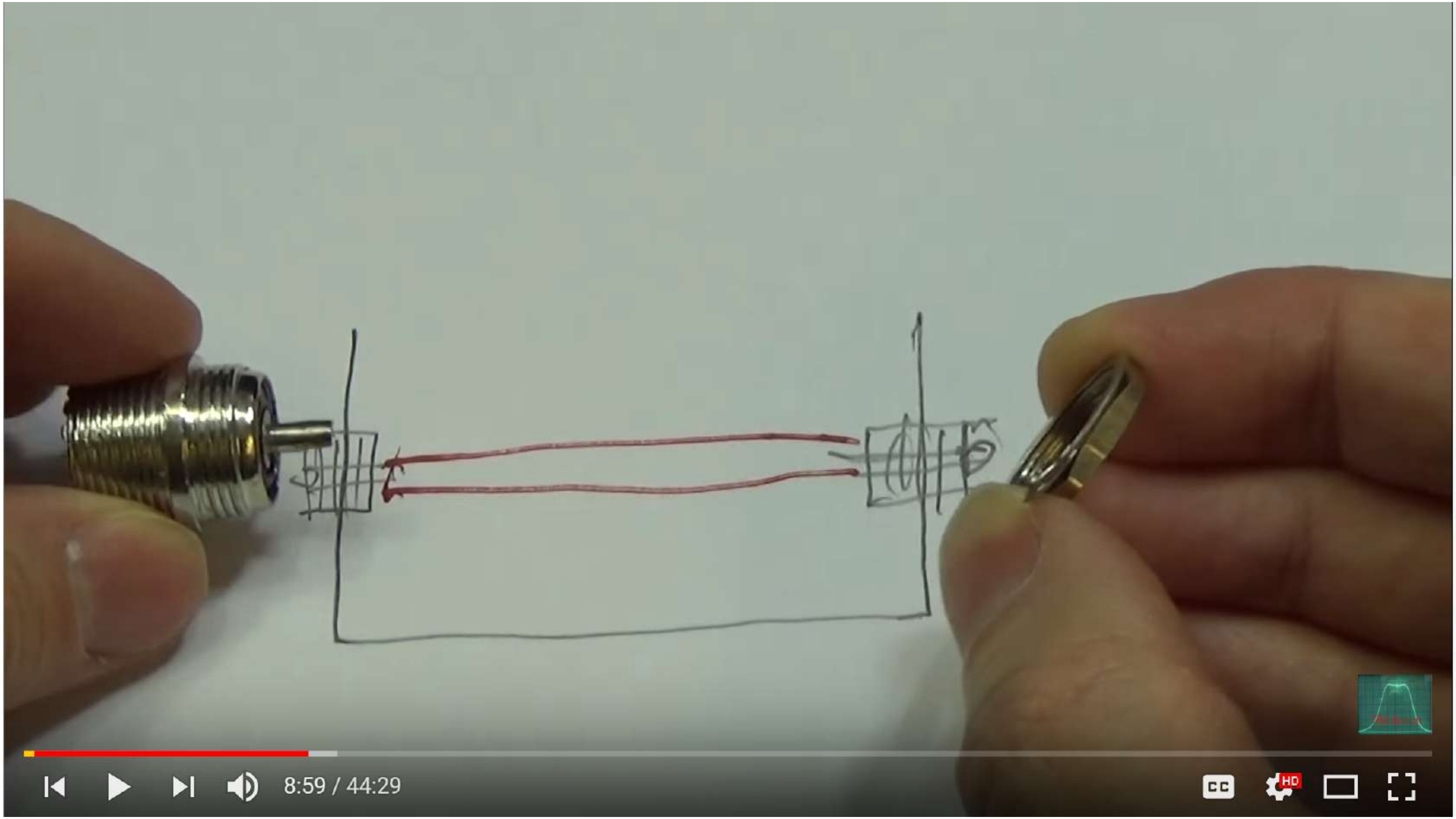


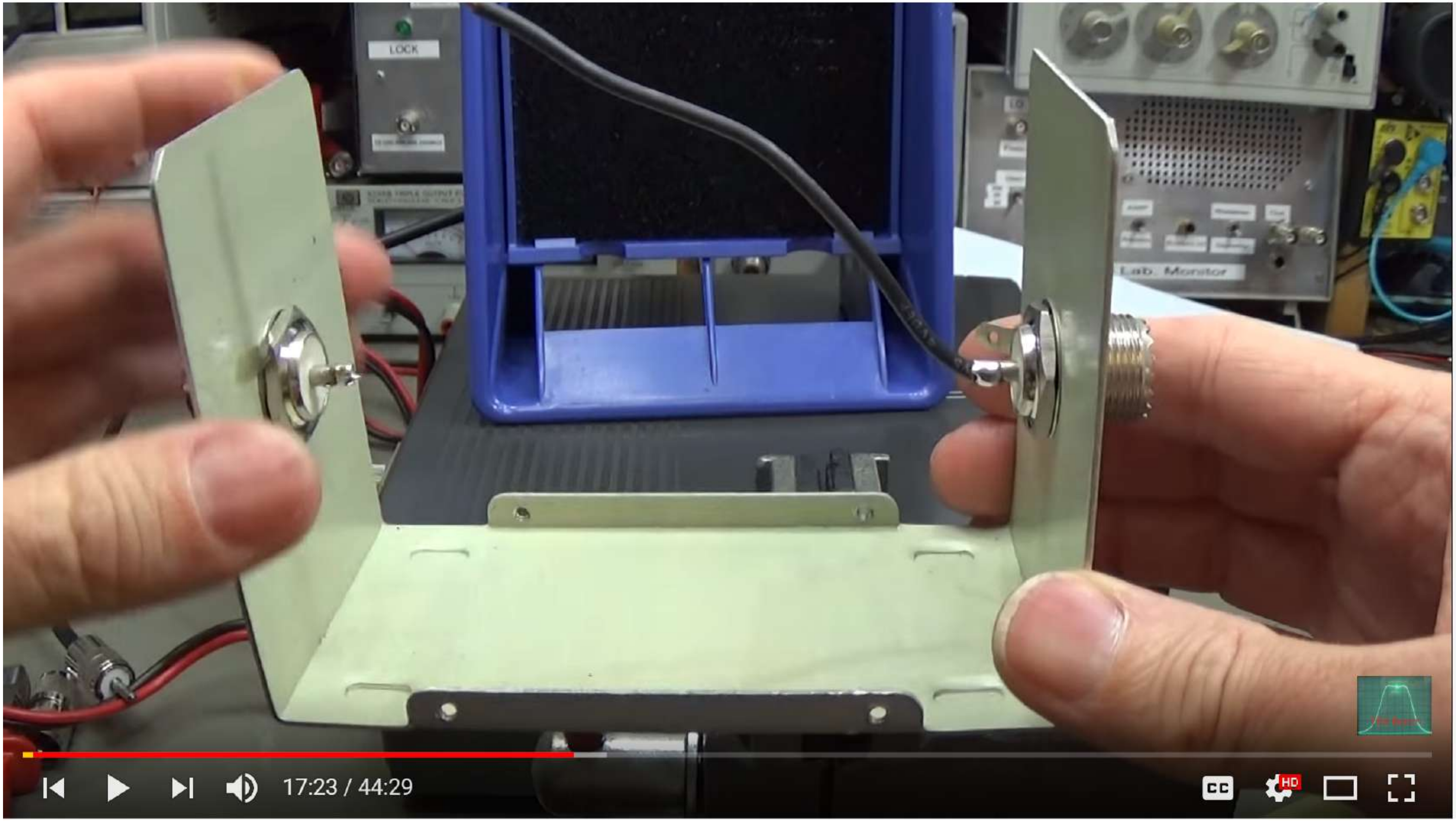
T50 Toroid
10:24 / 14:19
CC
HD


/ 14:19
CC
HD



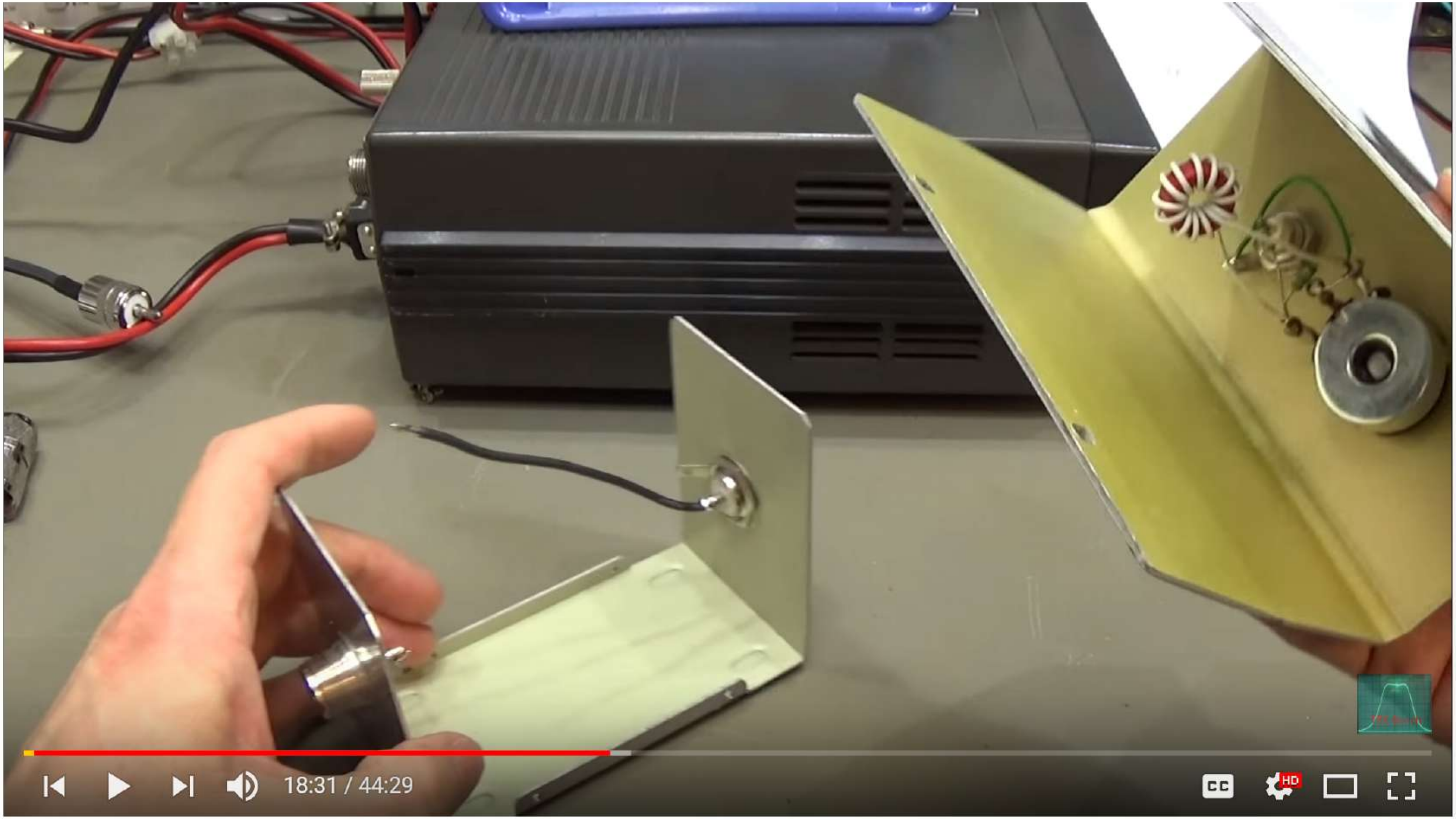
#74 Quick Tip: Build a Variable RF Tap for your shack or lab


8:59 / 44:29

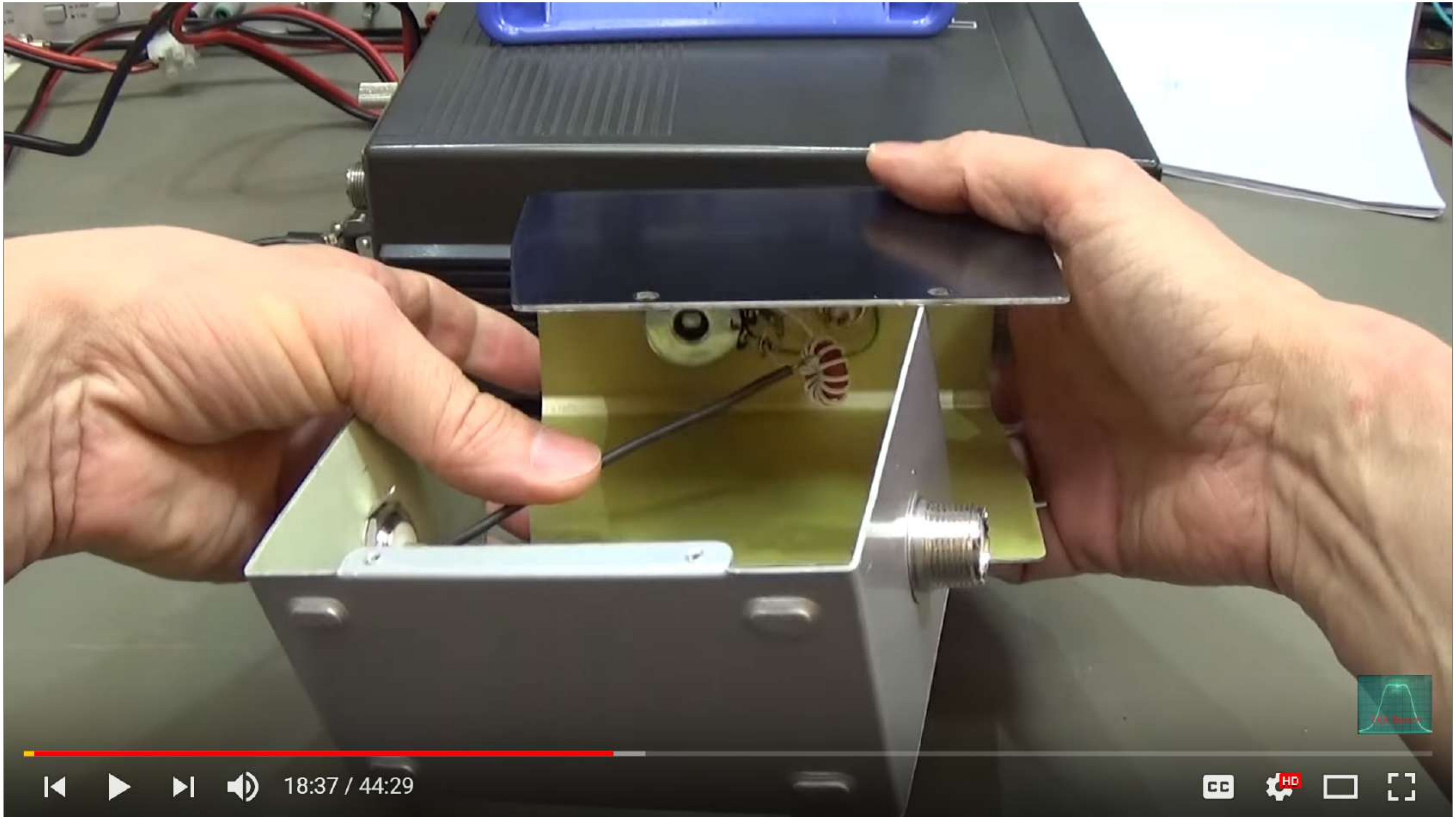

LOCK
Lab. Monitor
17:23 / 44:29
HD


▶
2
3
4
5


17:57 / 44:29
HD



#74 Quick Tip: Build a Variable RF Tap for your shack or lab


18:37 / 44:29

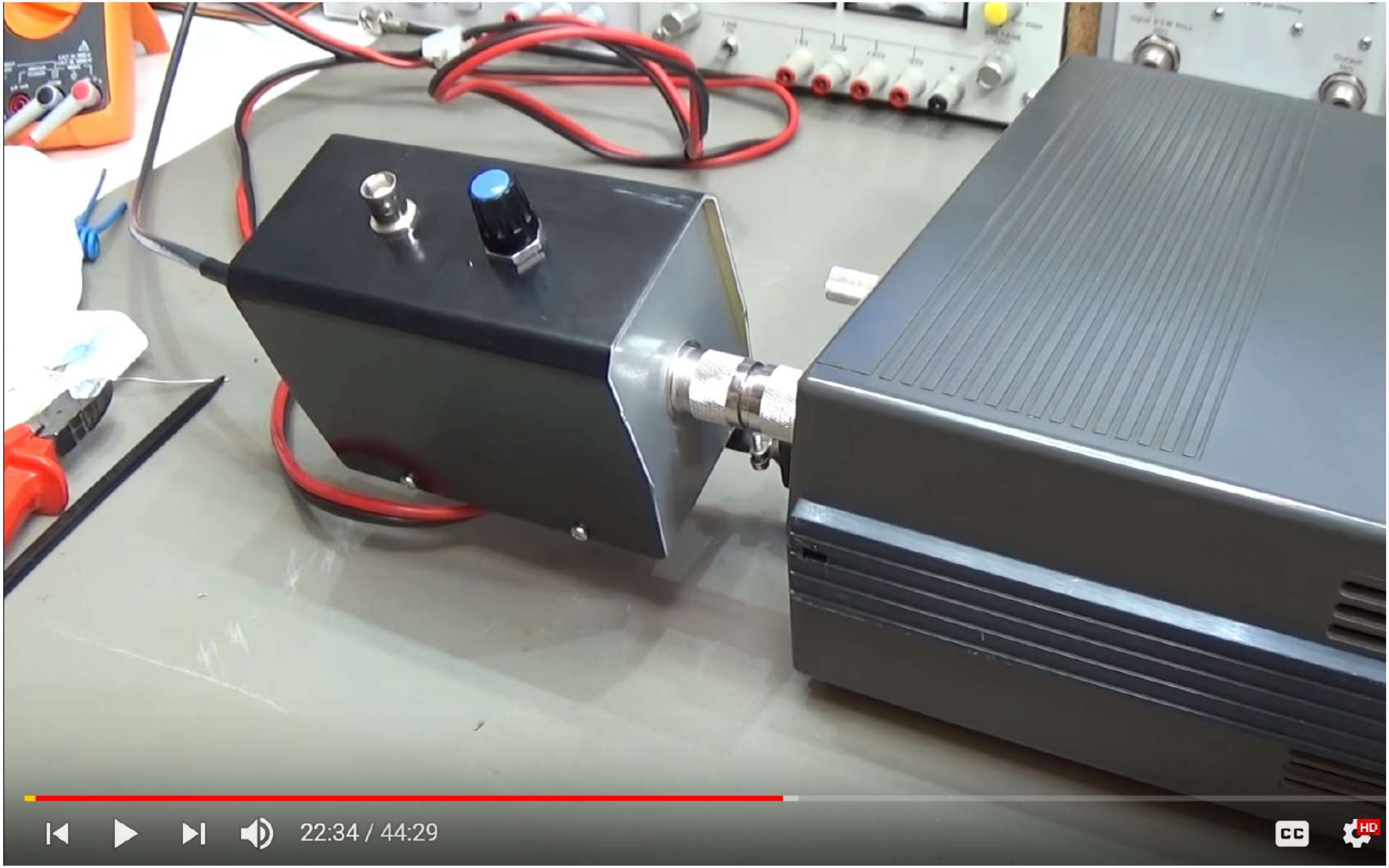

18:42 / 44:29
HD

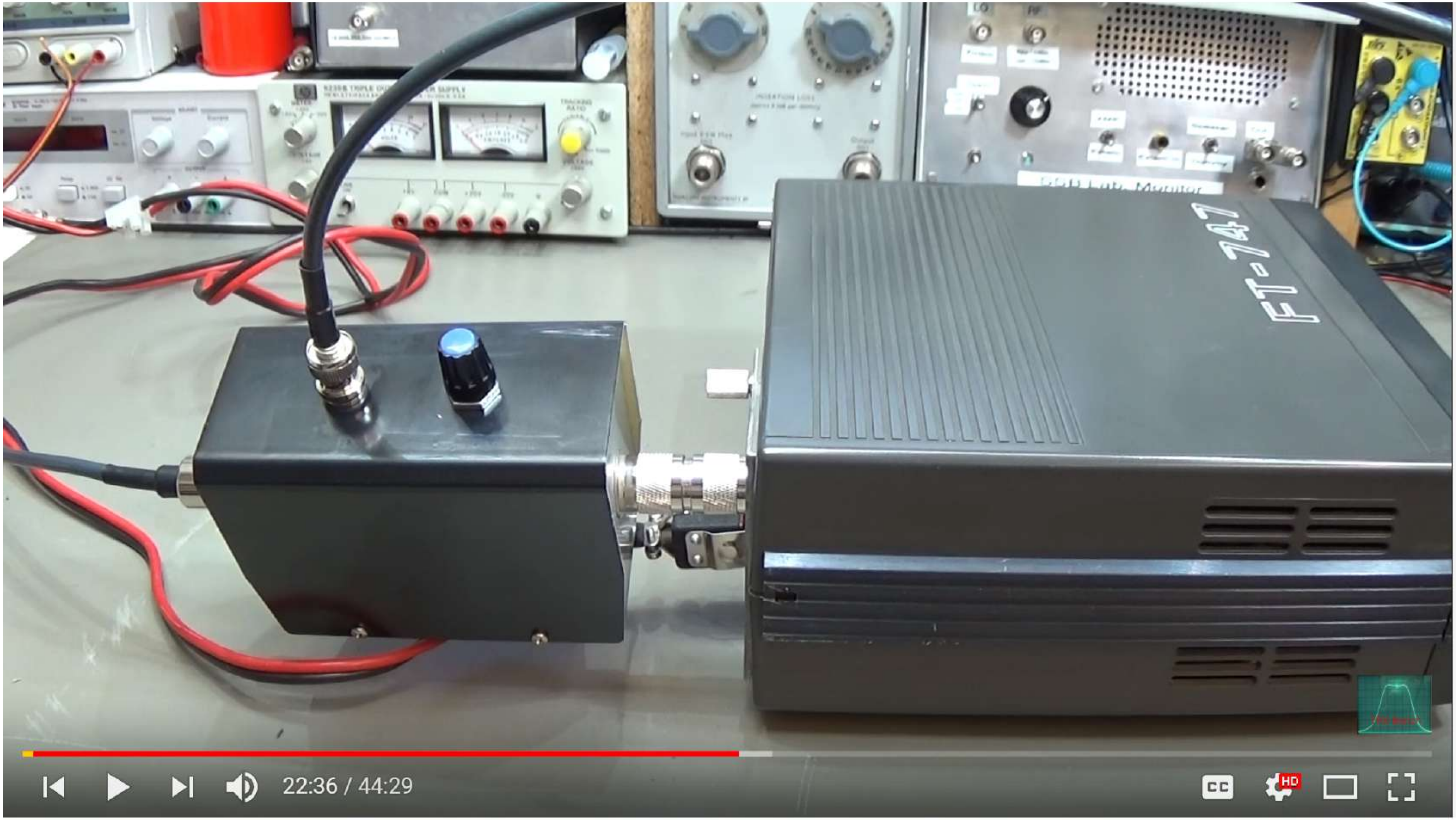

18:47 / 44:29
HD

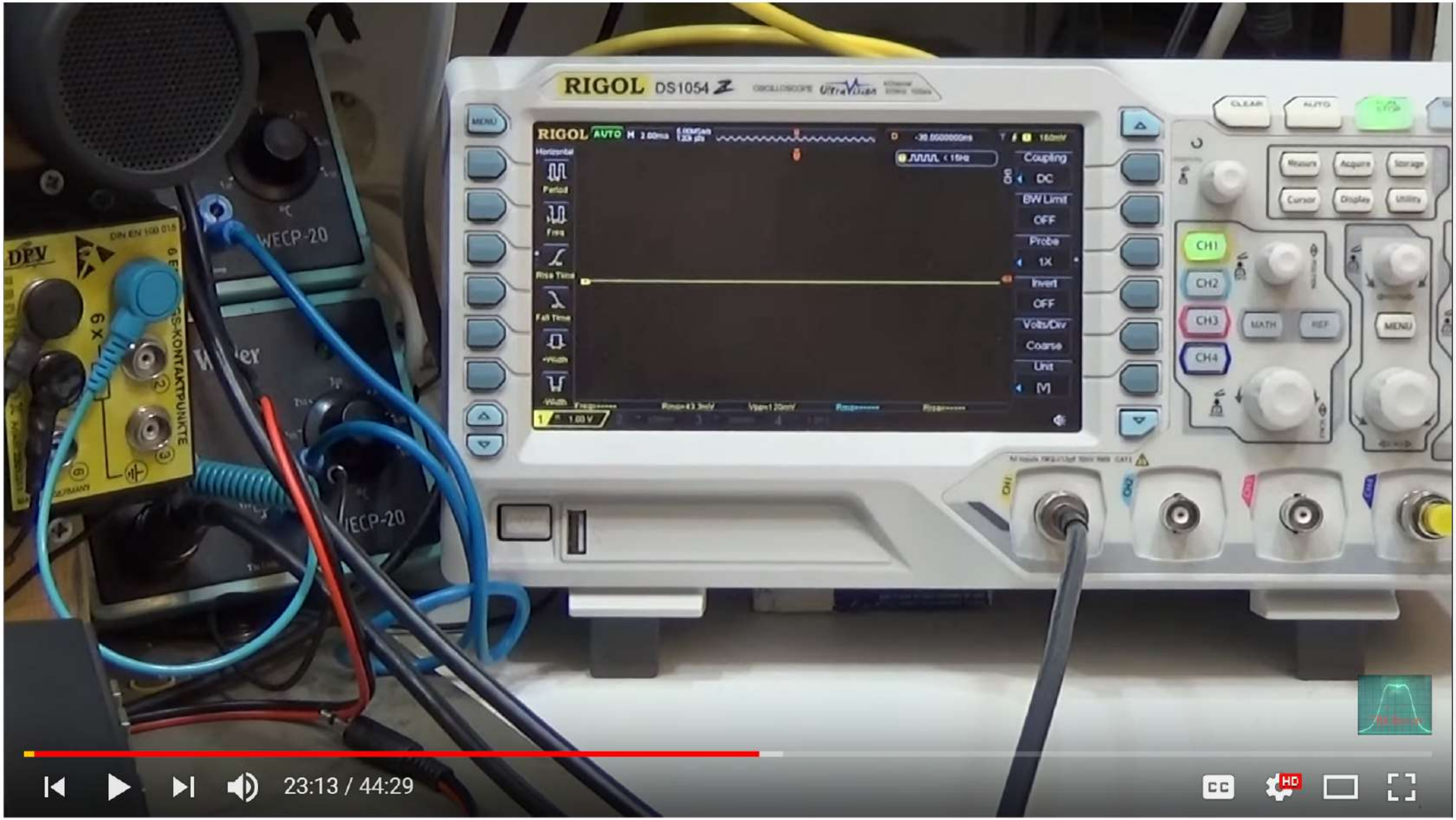

19:27 / 44:29


21:27 / 44:29

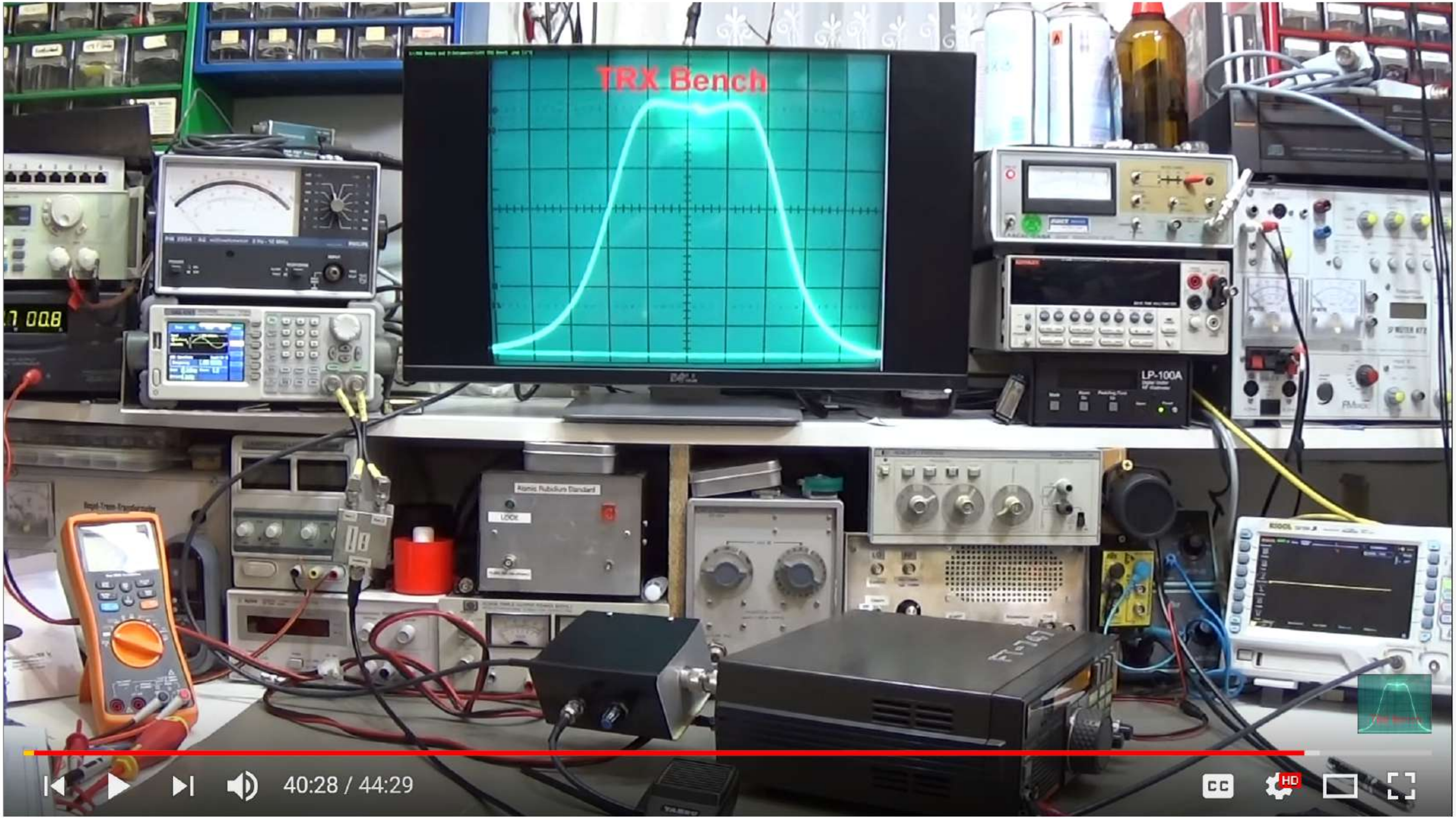

21:35 / 44:29


22:34 / 44:29

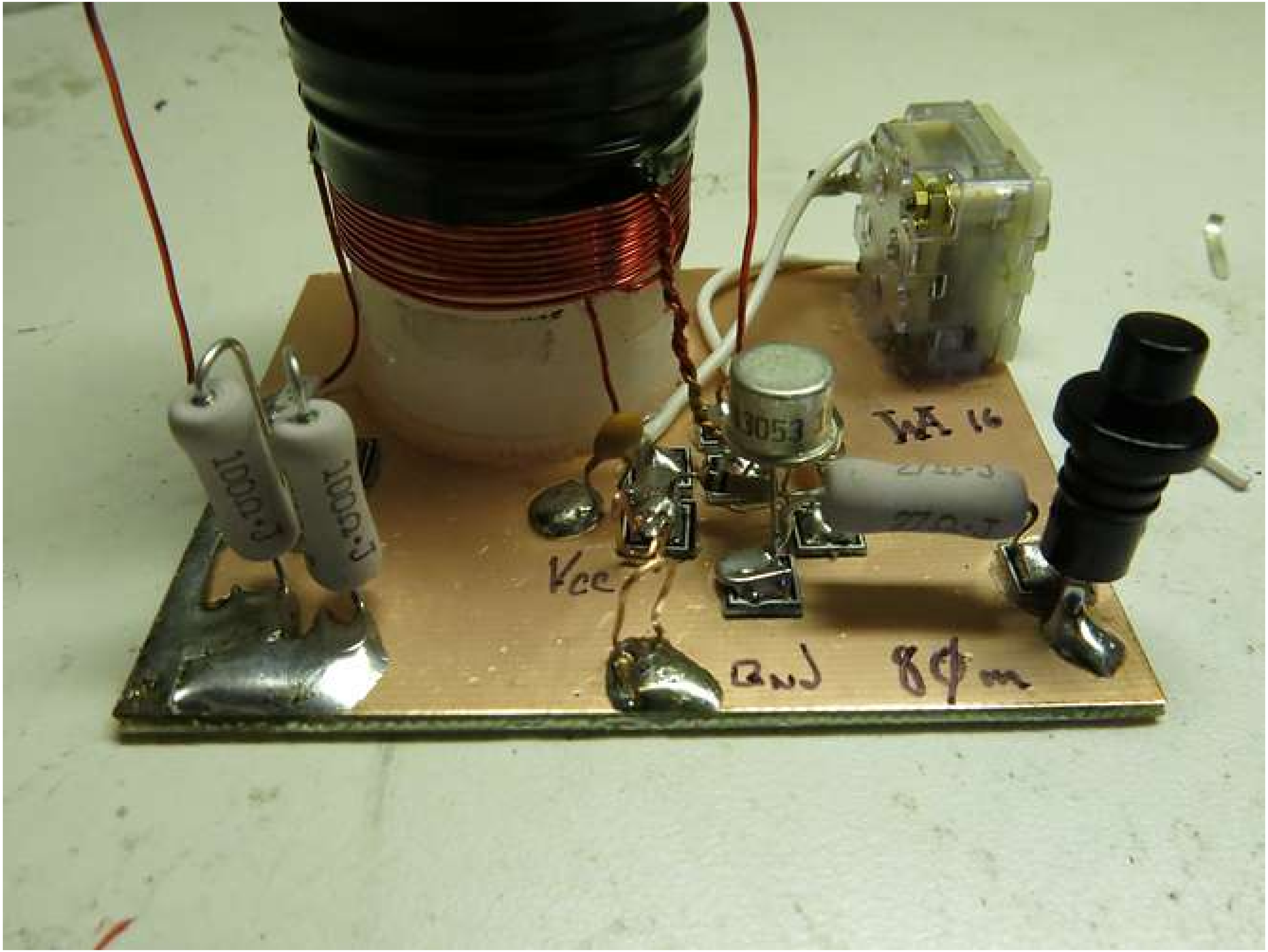

FT-747
22:36 / 44:29
HD


RIGOL DS1054Z
23:13 / 44:29
WECP-20
Coupling
DC
BW Limit
OFF
Probe
1X
Invert
OFF
Volts/Div
Coarse
Unit
[V]
CH1
CH2
CH3
CH4
MATH
REF
MENU
AUTO
CLEAR

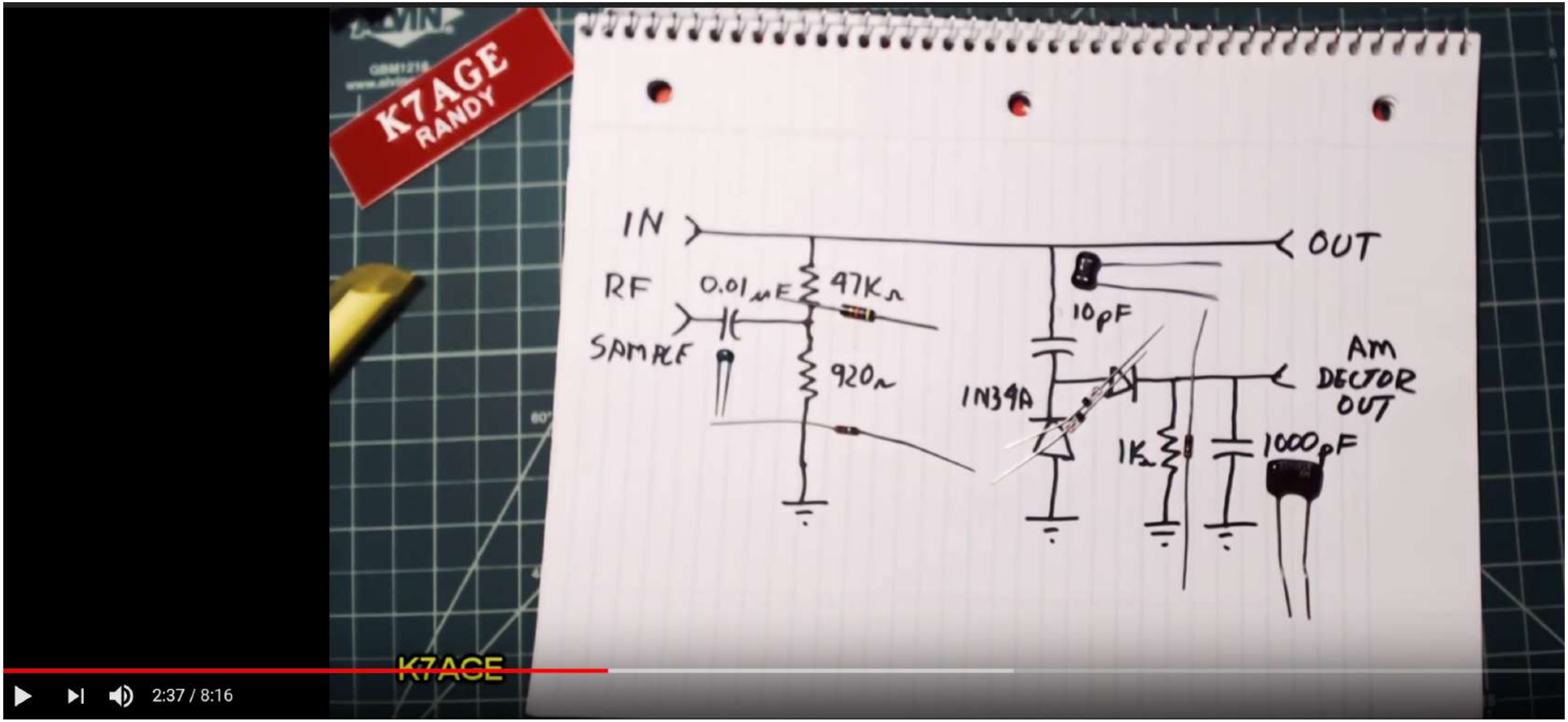

FT-747
ON AIR
HF TRANSCEIVER
FT-747GX
POWER
MIC
PHONES
NAR
ATT
NB
MOX
AF SQL
MIC DRIVE
24:39 / 44:29



#74 Quick Tip: Build a Variable RF Tap for your shack or lab



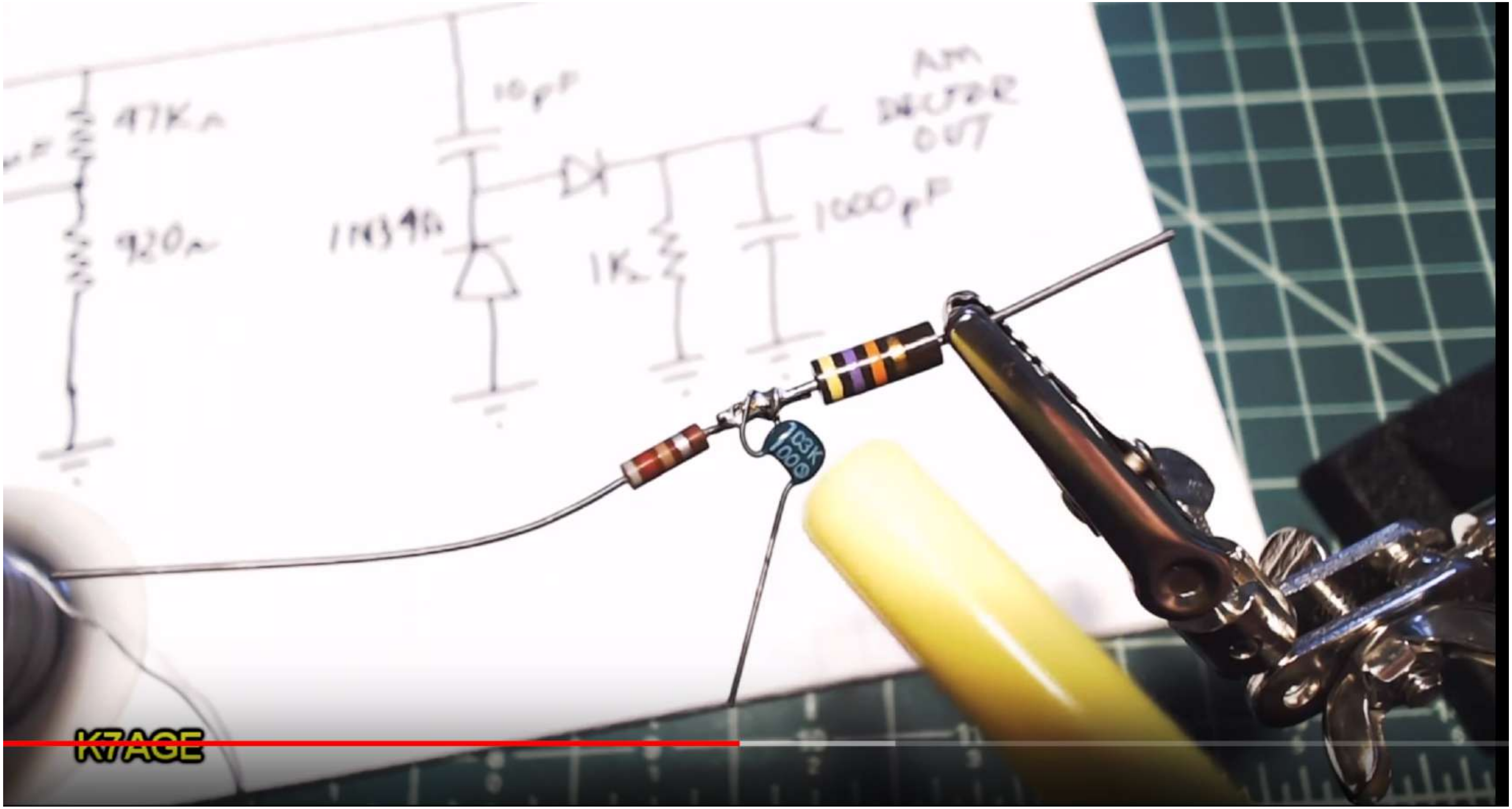
100Ω J
100Ω J
Vcc
Gnd
80m
270 J



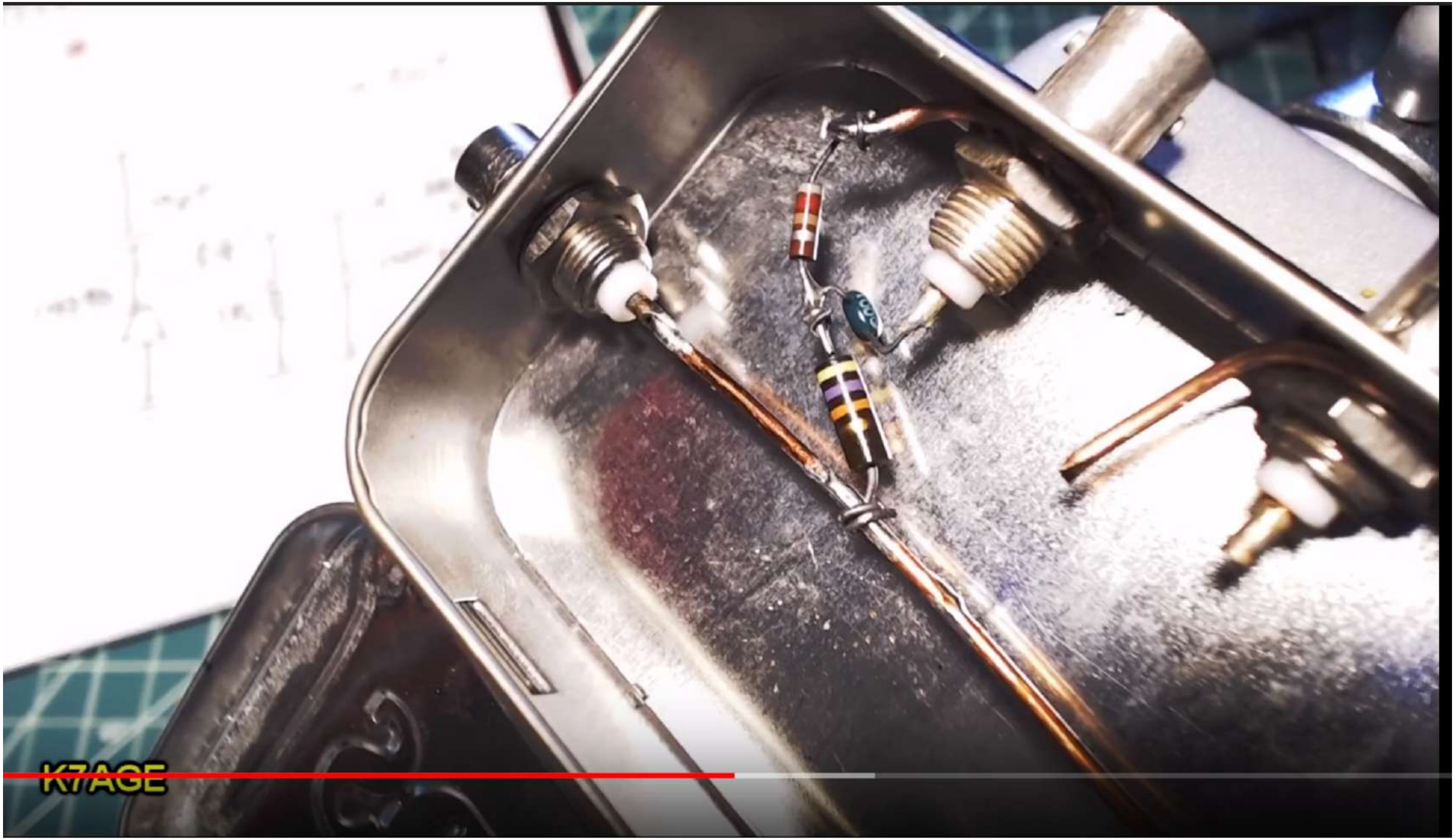
How To Build An RF Sampler Box

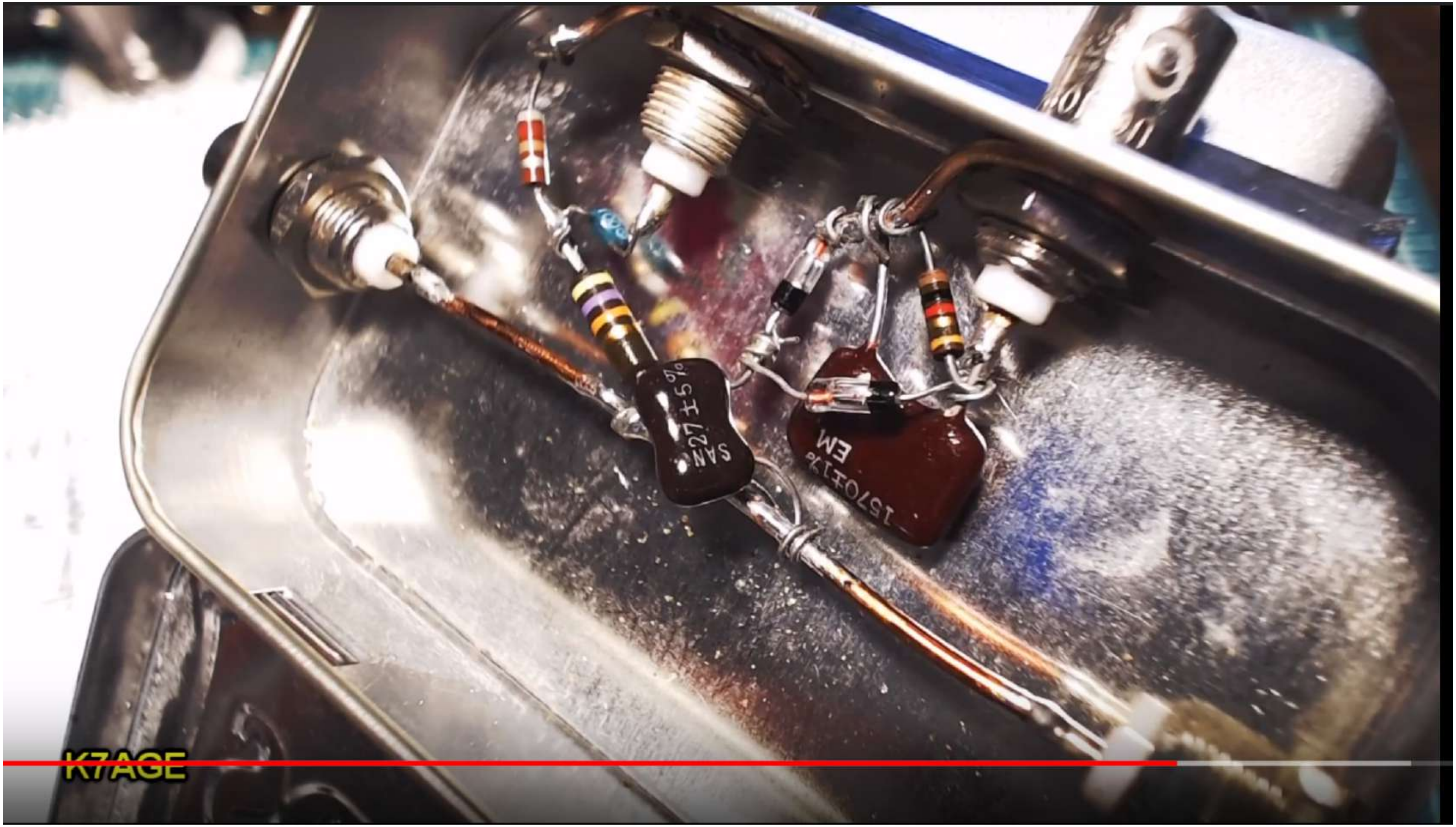

K7AGE
RANDY
The Original Celebrated
ALTOIDS
CURIOUSLY STRONG MINTS
100% Natural
PEPPERMINT
K7AGE

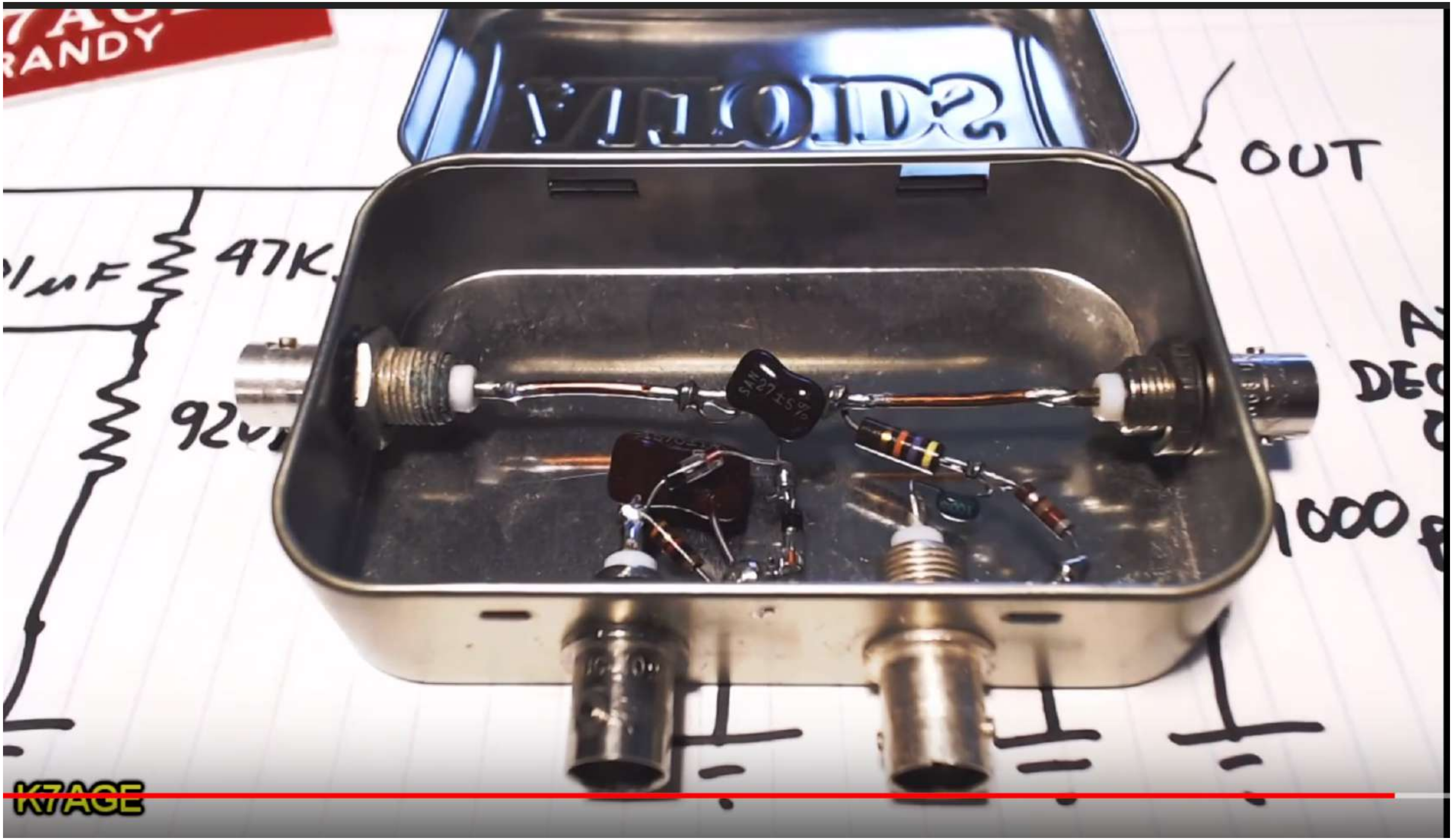

K7AGE
RANDY
ALVIN
ALTOIDS
K7AGE

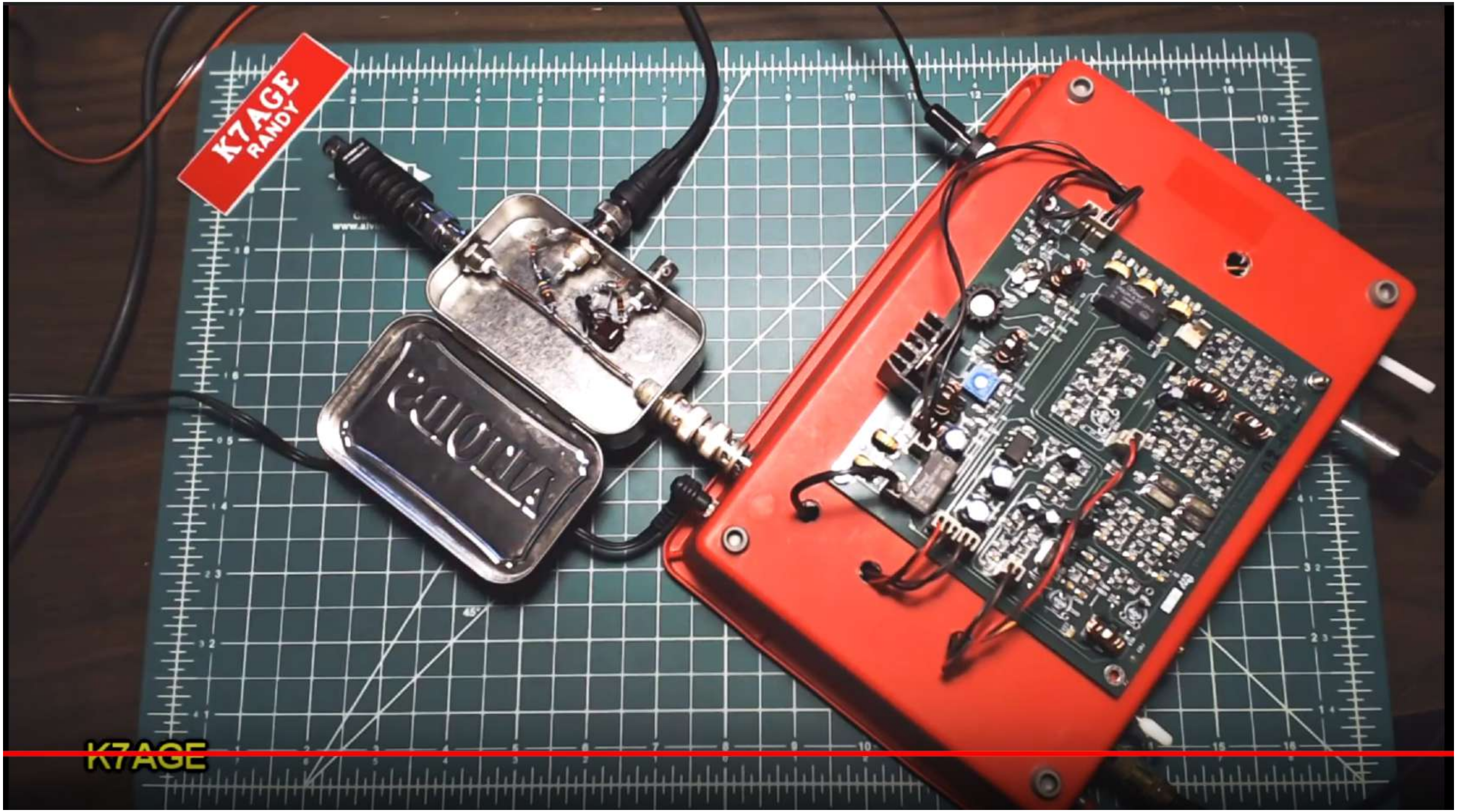


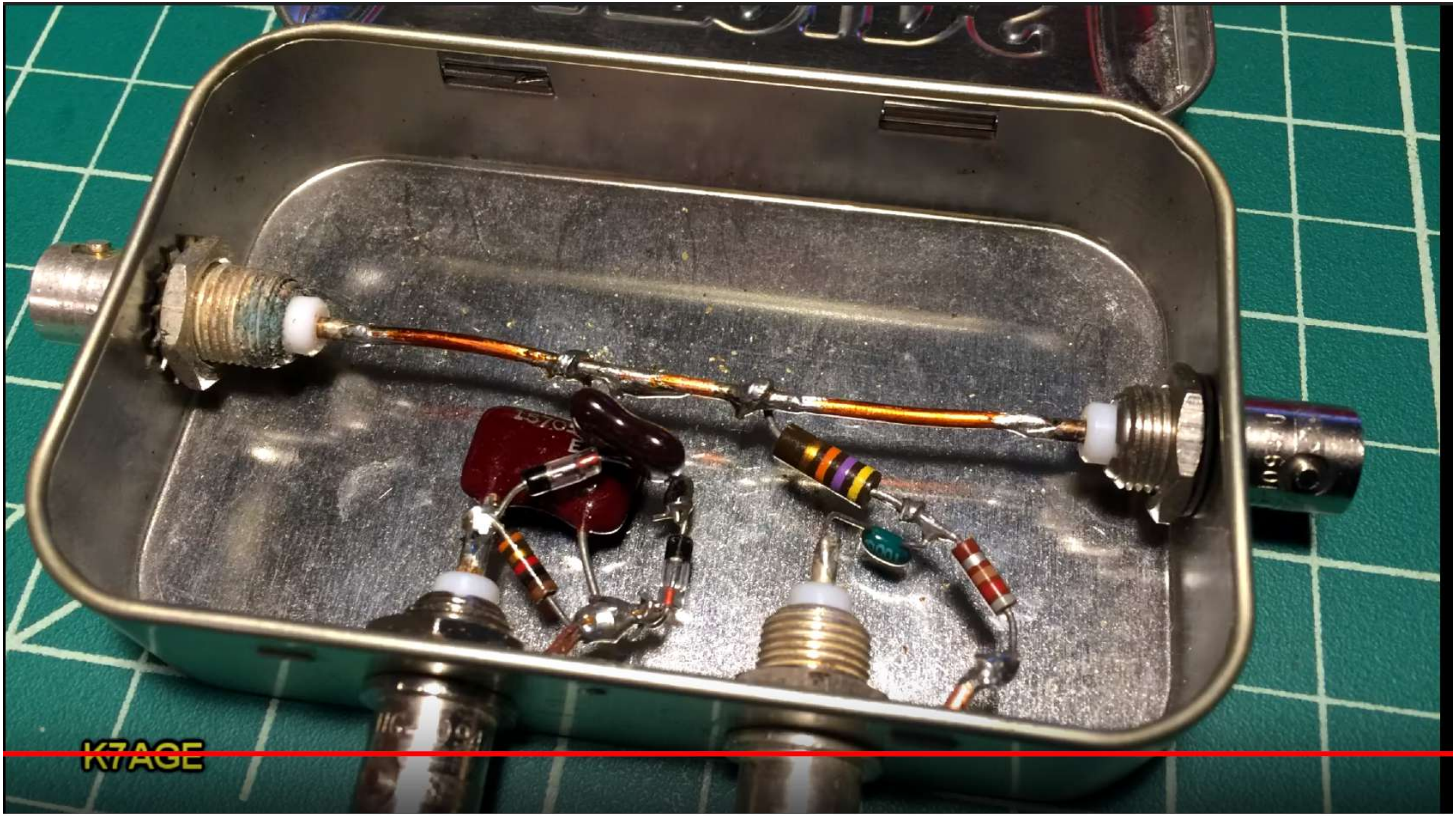
47K
920
10pF
1N34A
1K
1000pF
AM
DECTOR
OUT
K7AGE


K7AGE

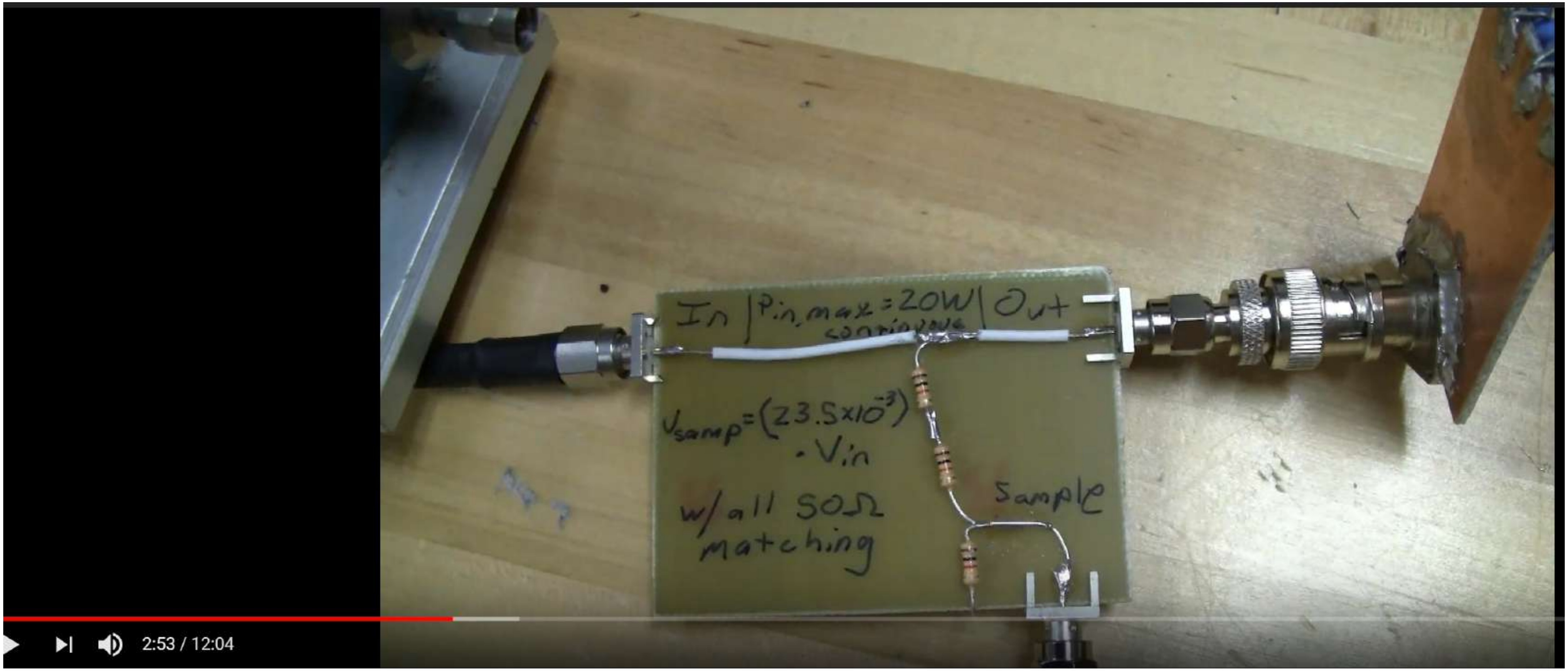

K7AGE
SAN
27±5%
EM
1570±1%


RANDY
47K
OUT
1000
K7AGE


K7AGE
RANDY
K7AGE

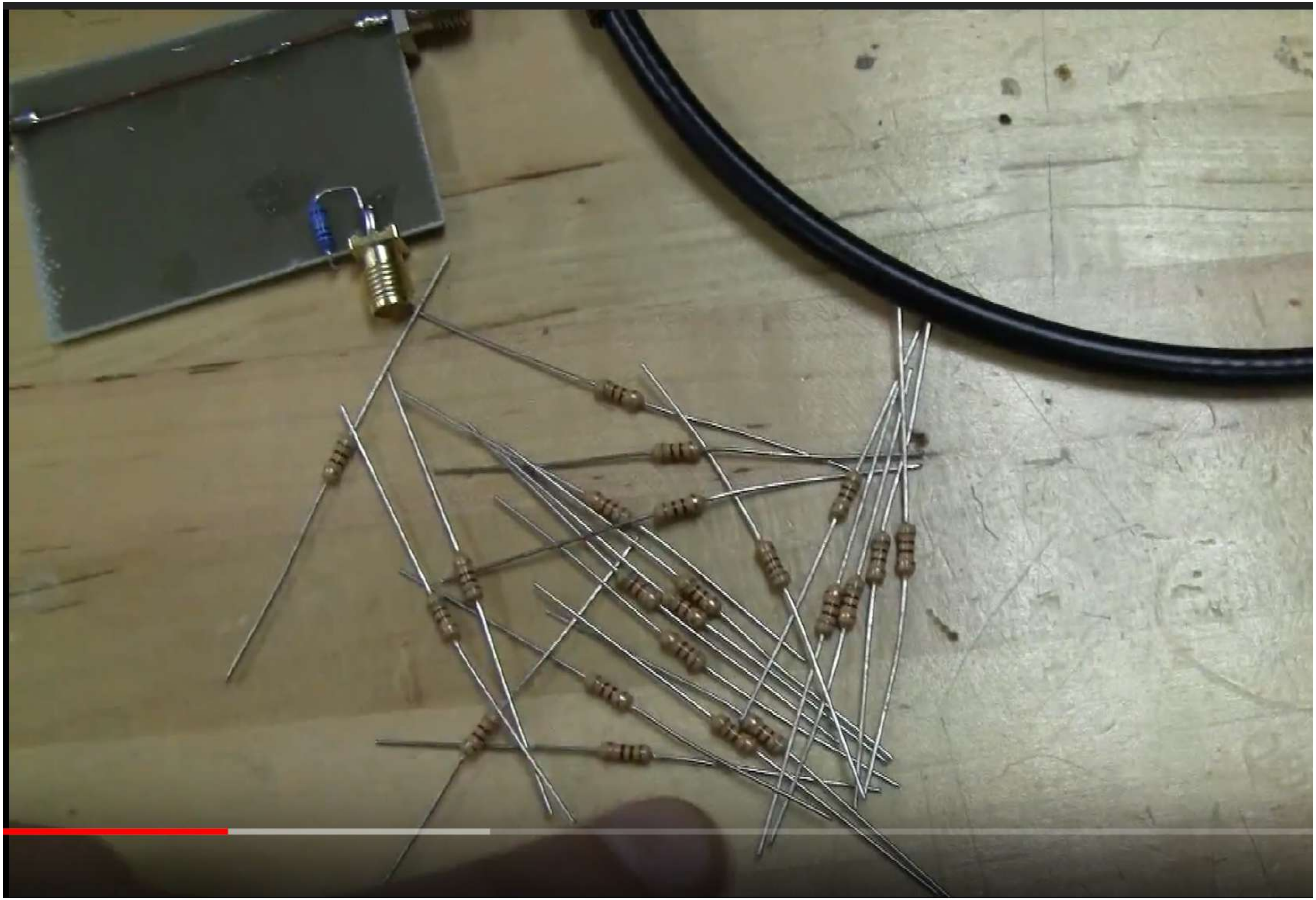

K7AGE

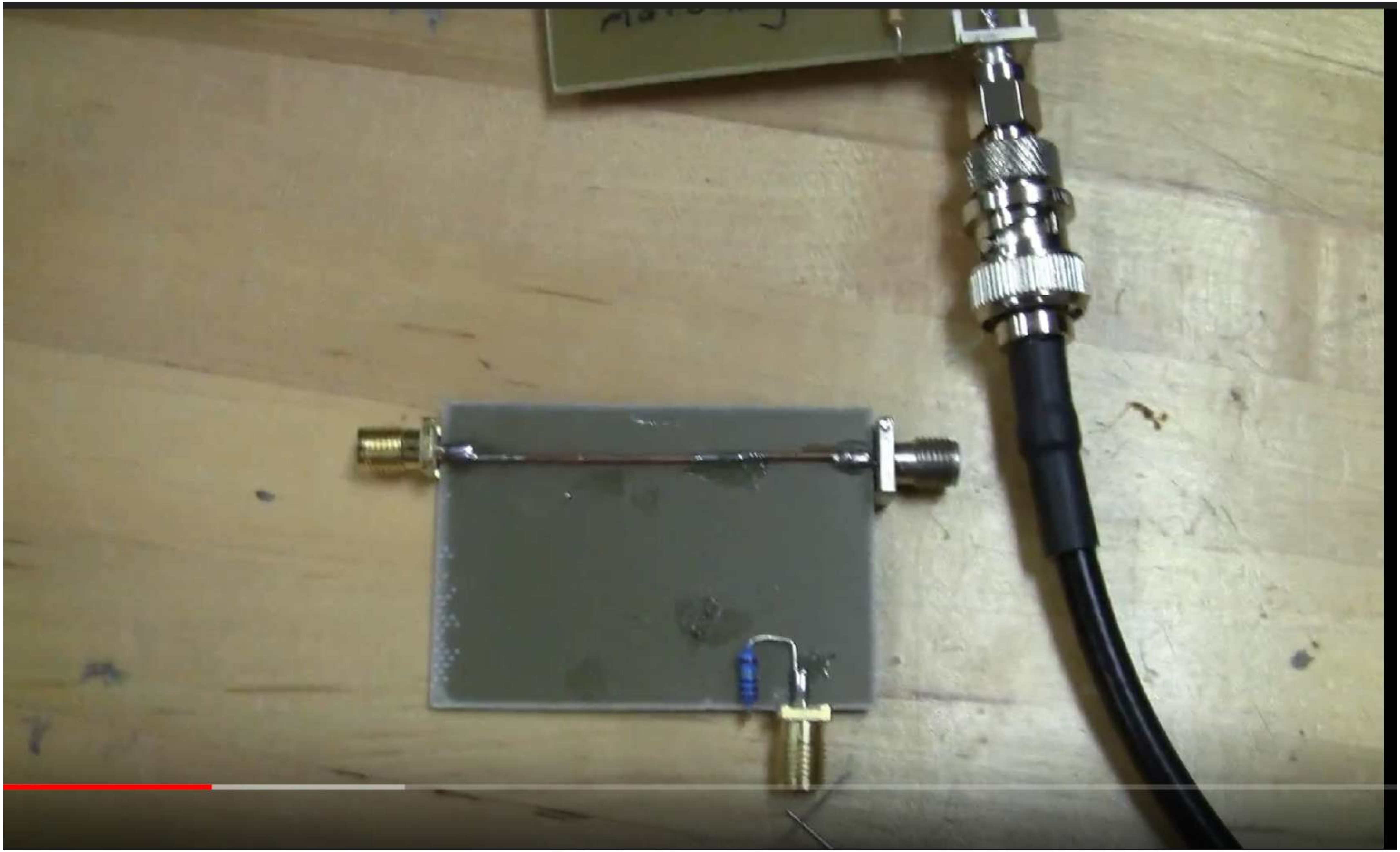

K7AGE

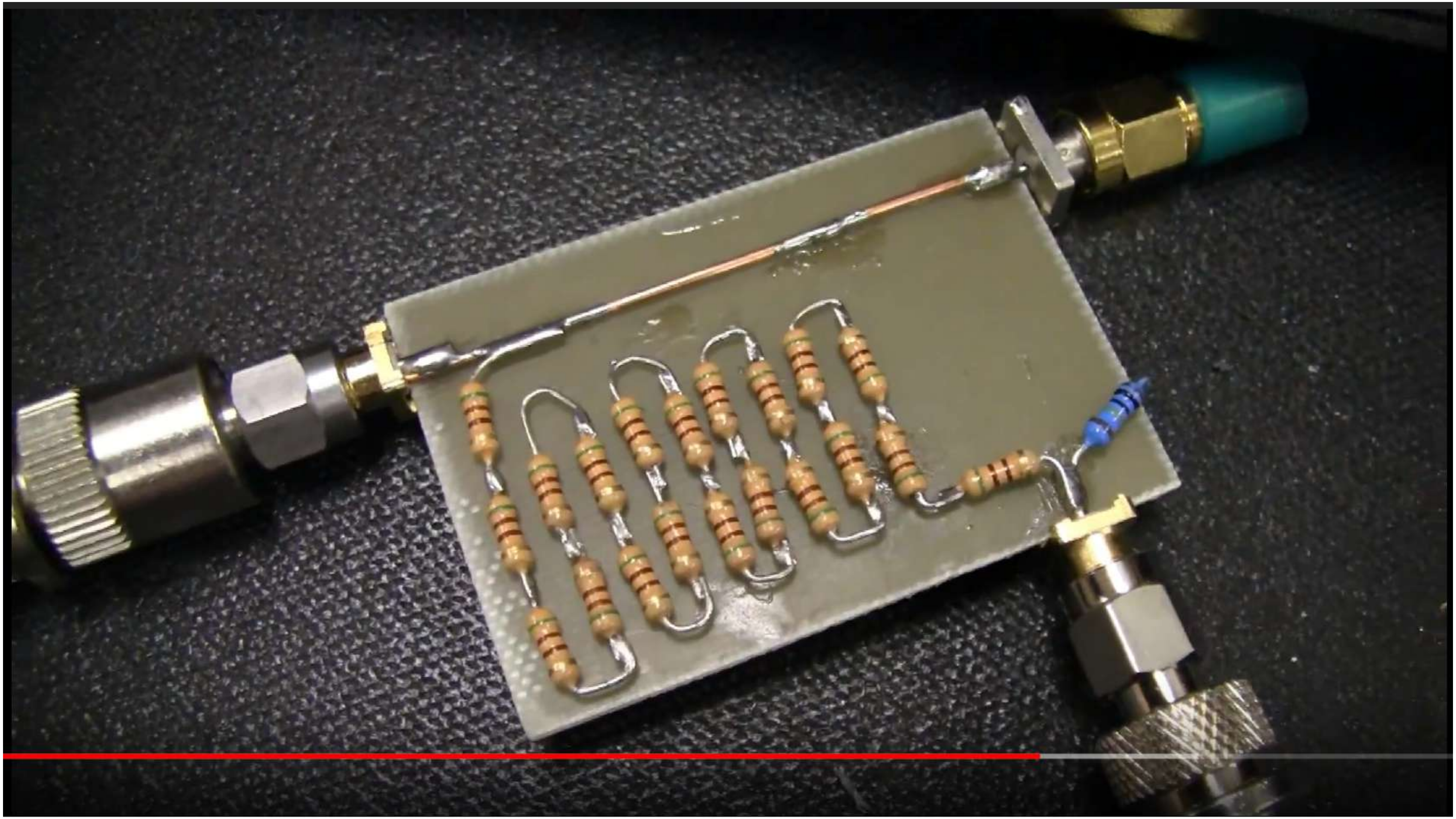


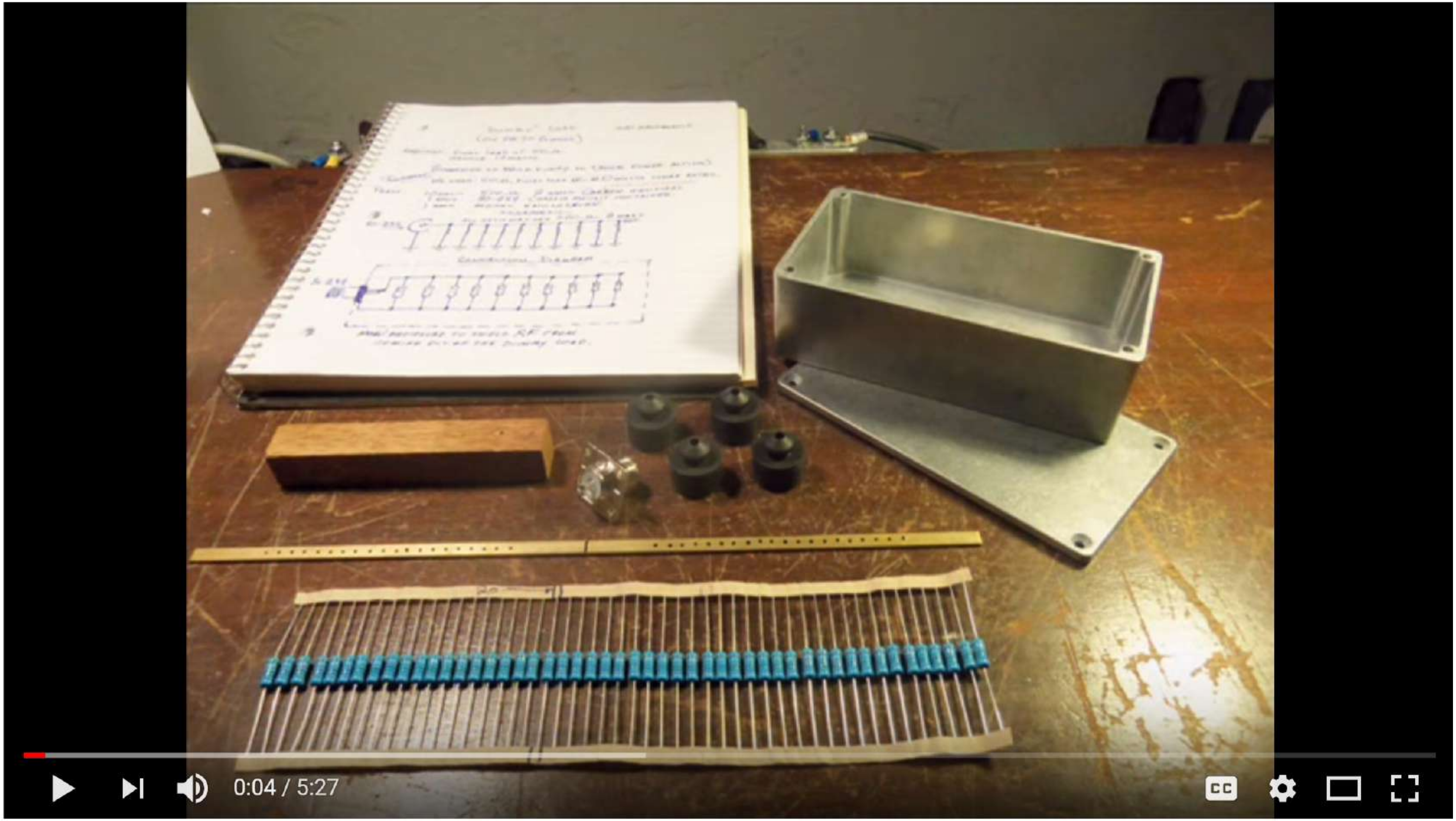
Up next

Building an RF Signal Sampler for Oscilloscope Measurements

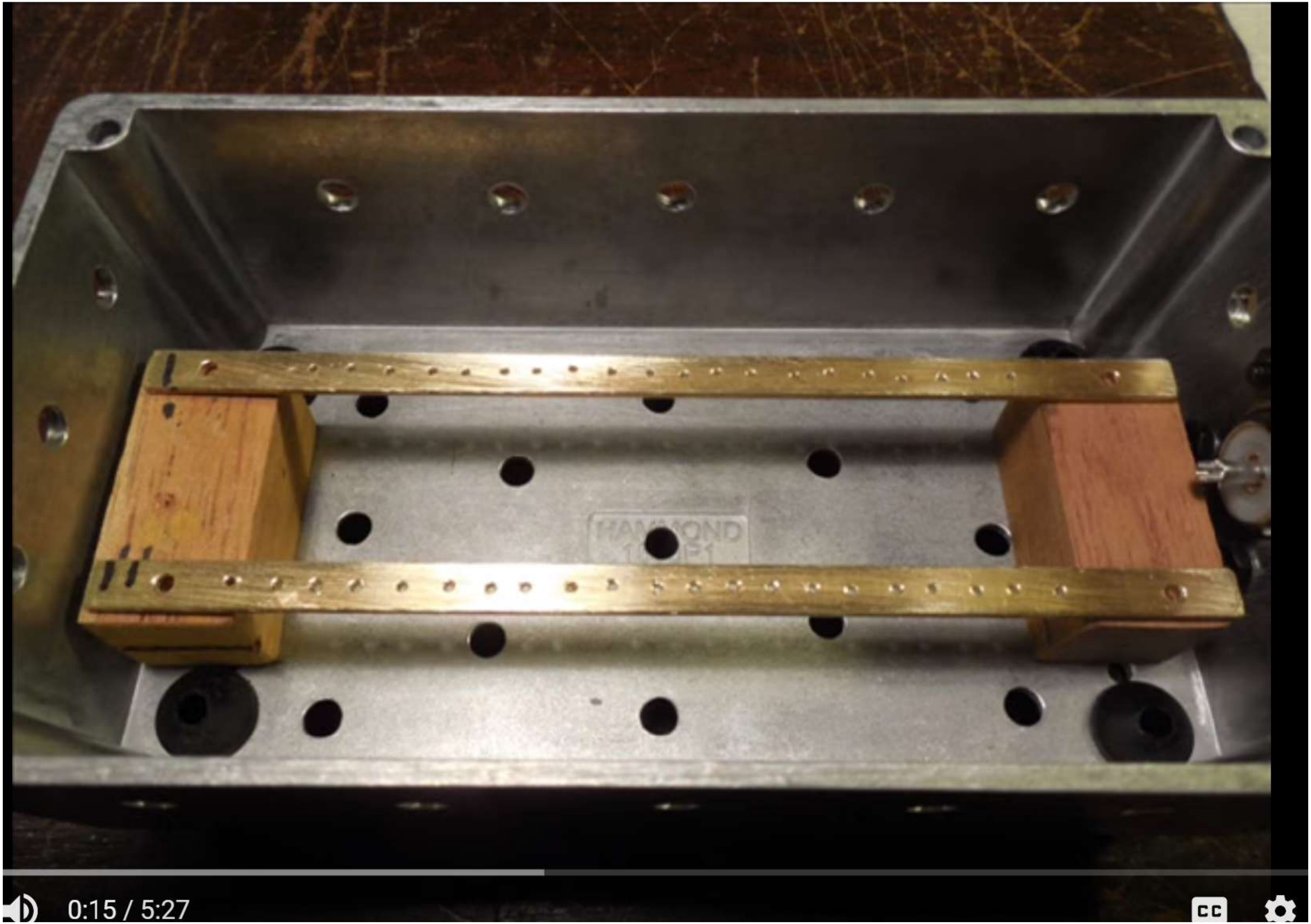


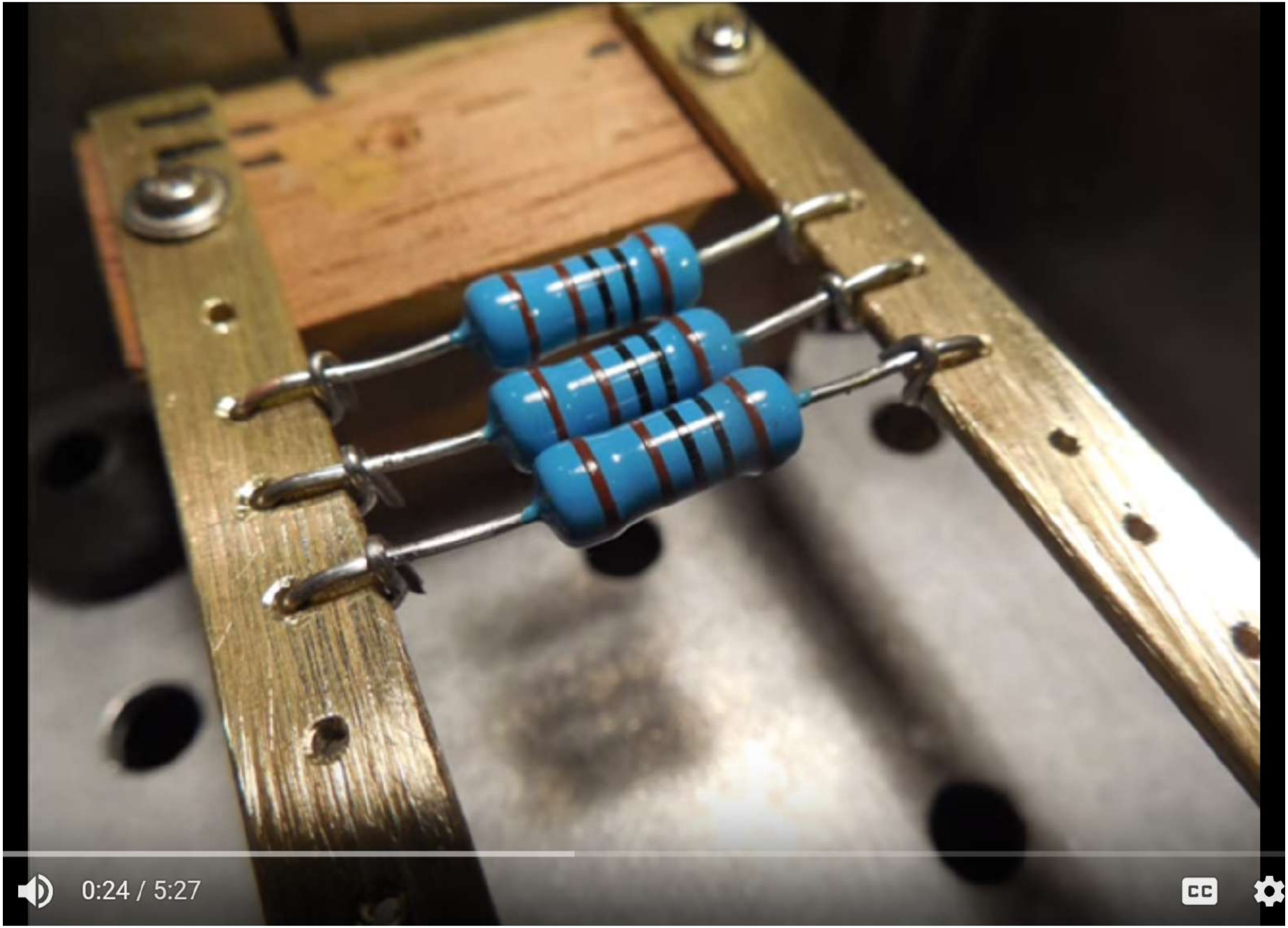


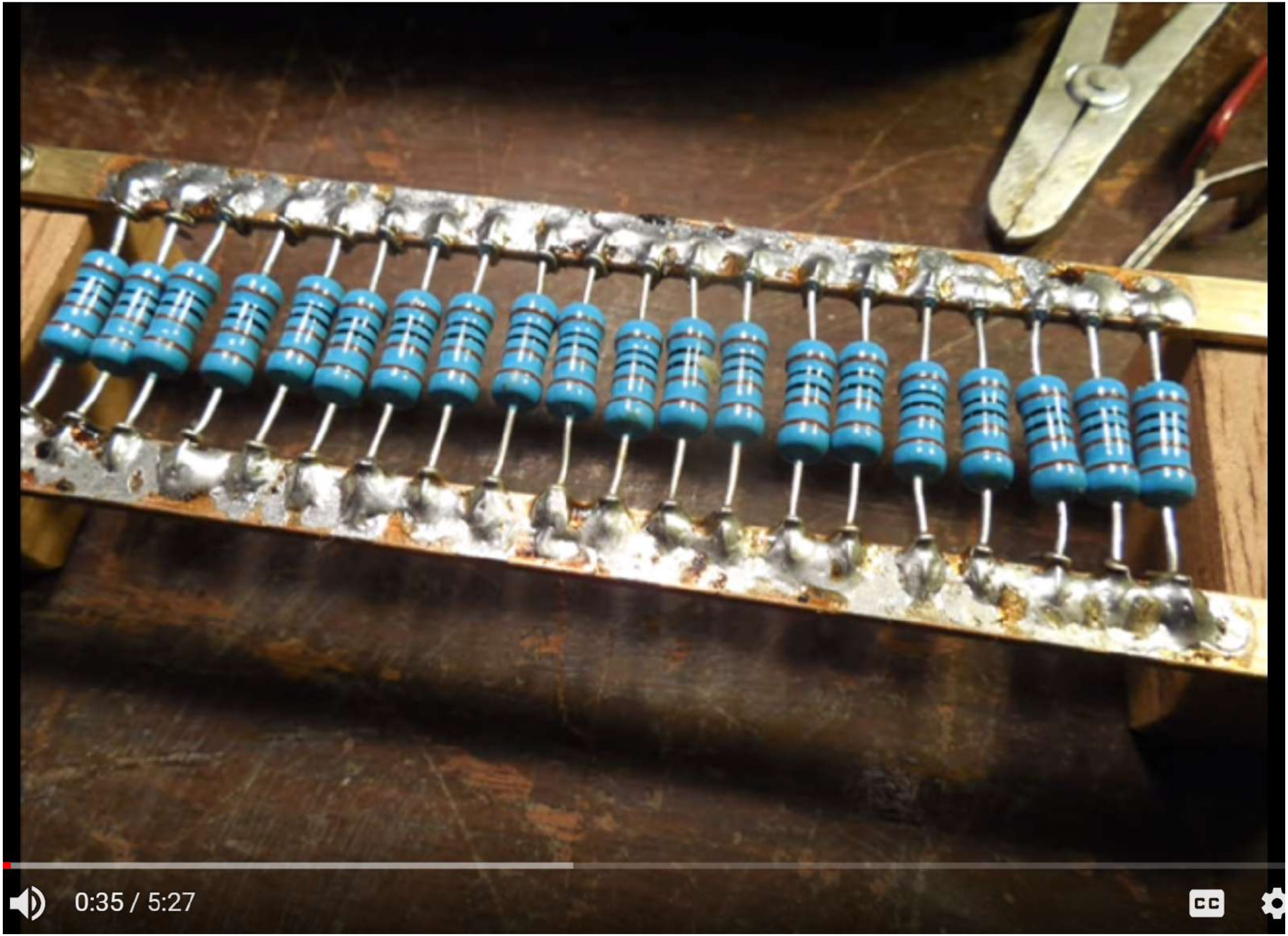


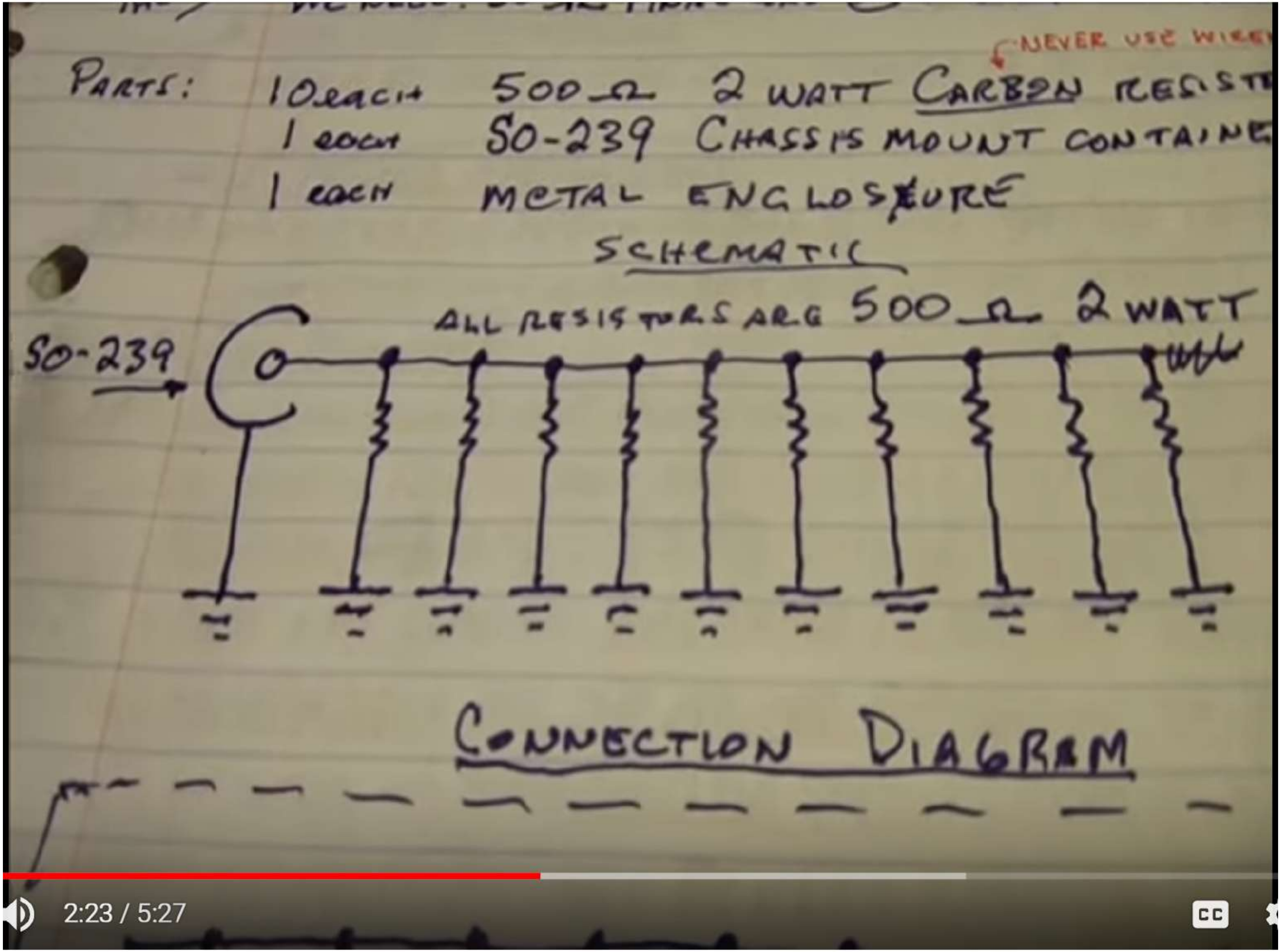


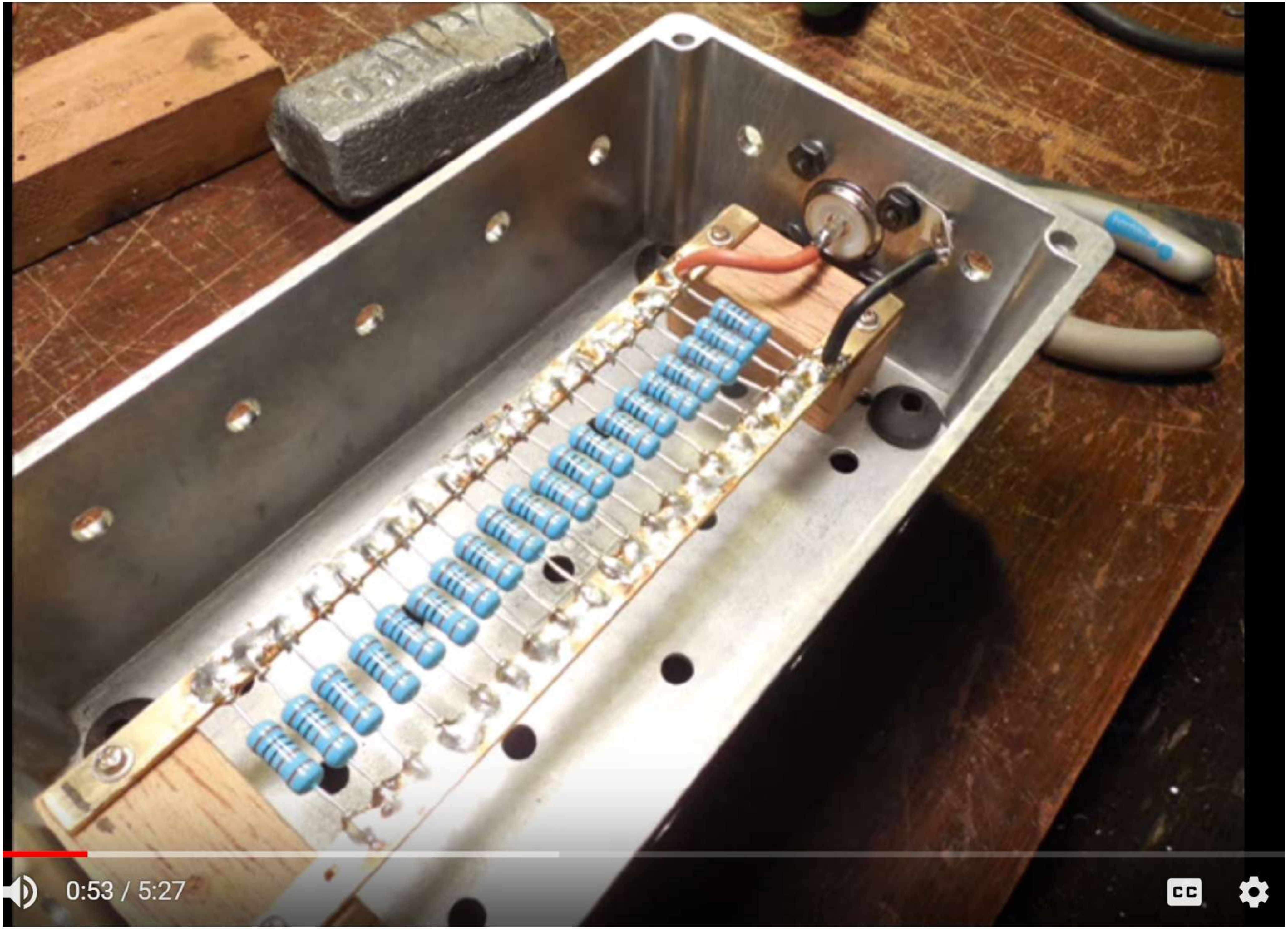
RF Dummy Load


0:15 / 5:27

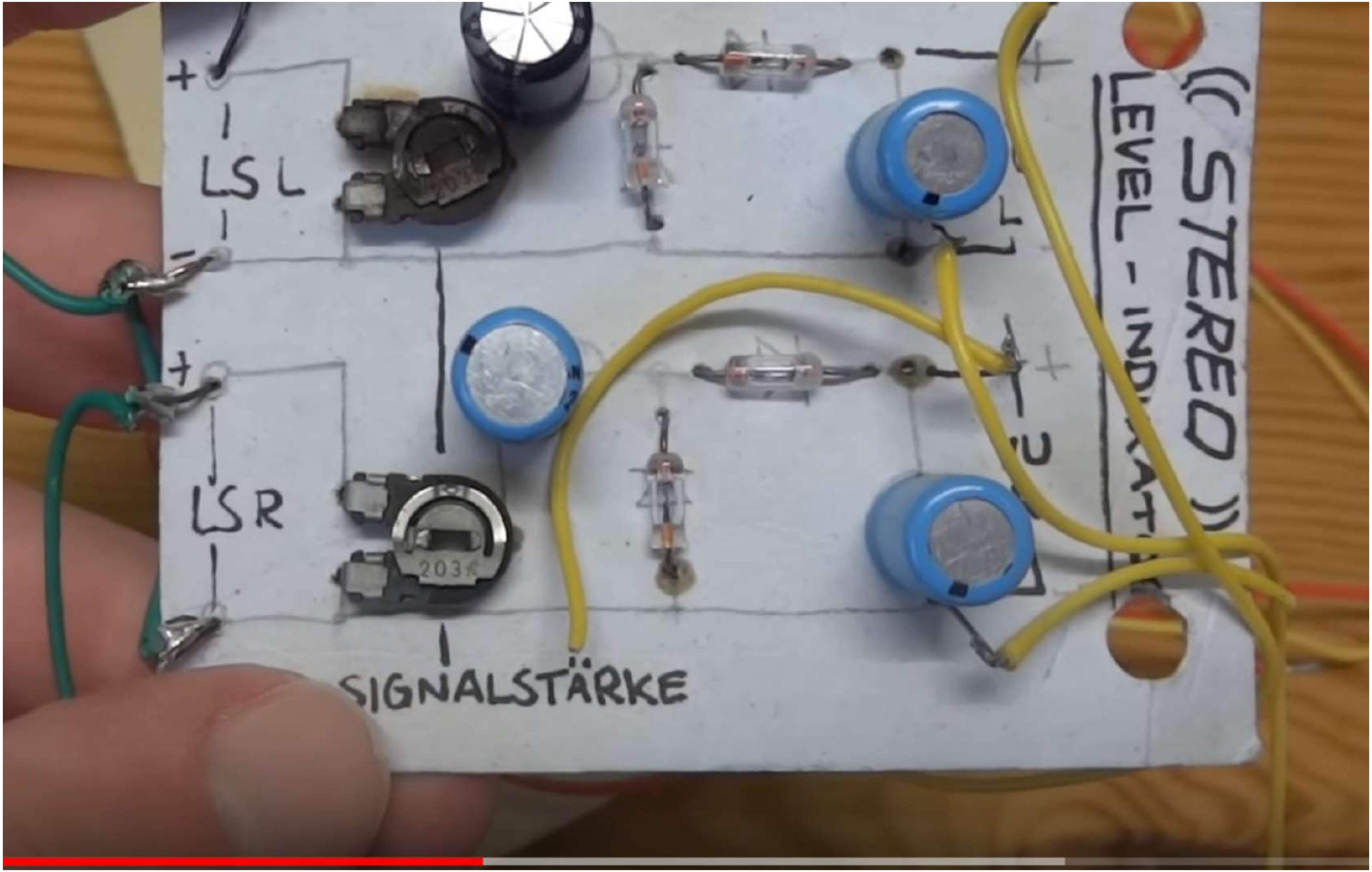

0:24 / 5:27
CC

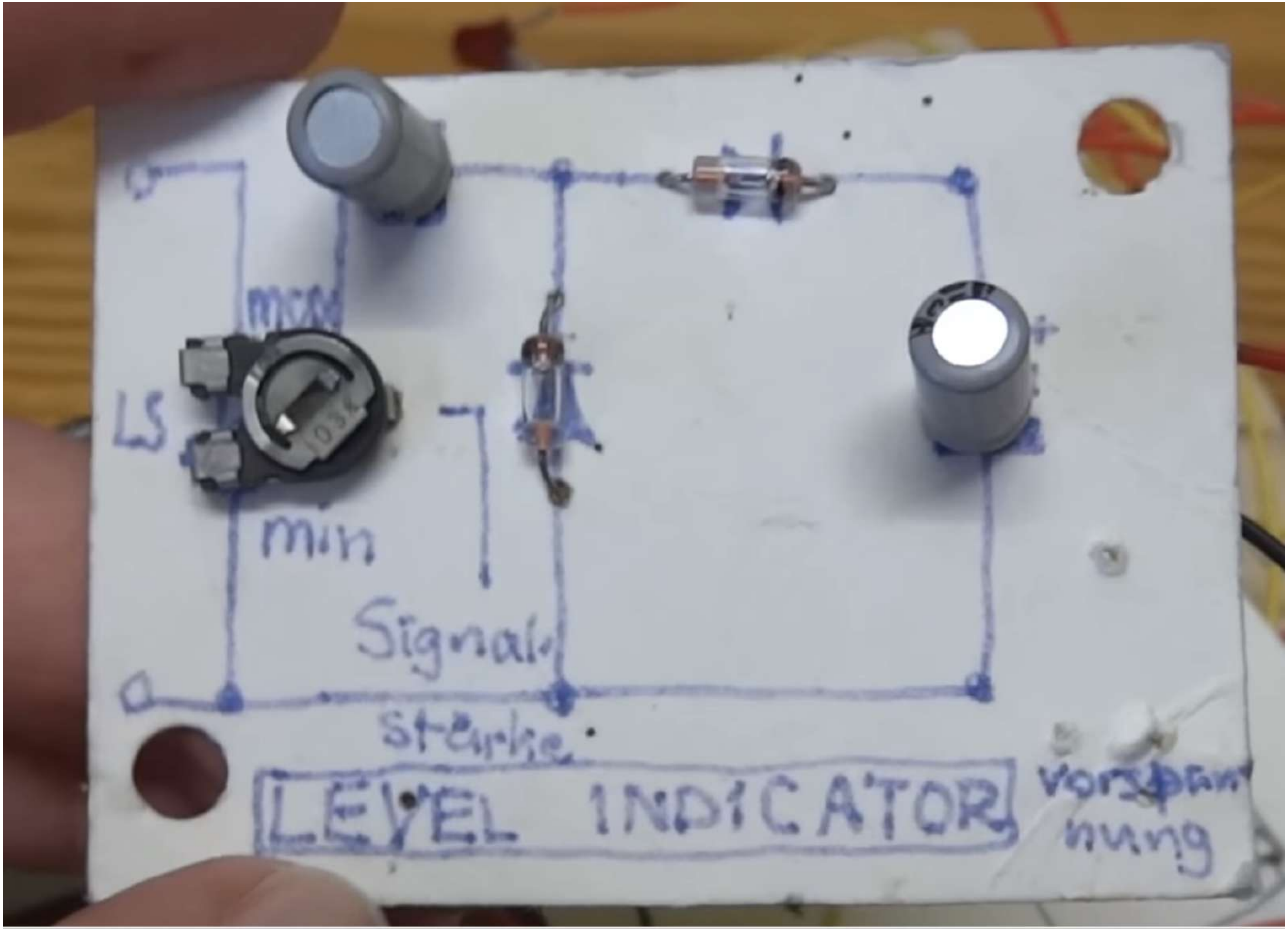

0:35 / 5:27


NEVER USE WIRE
PARTS: 10 each 500 Ω 2 WATT CARBON RESIST
1 each SO-239 CHASSIS MOUNT CONTAINE
1 each METAL ENCLOSURE
SCHEMATIC
ALL RESISTORS ARE 500 Ω 2 WATT
SO-239
CONNECTION DIAGRAM
2:23 / 5:27
CC

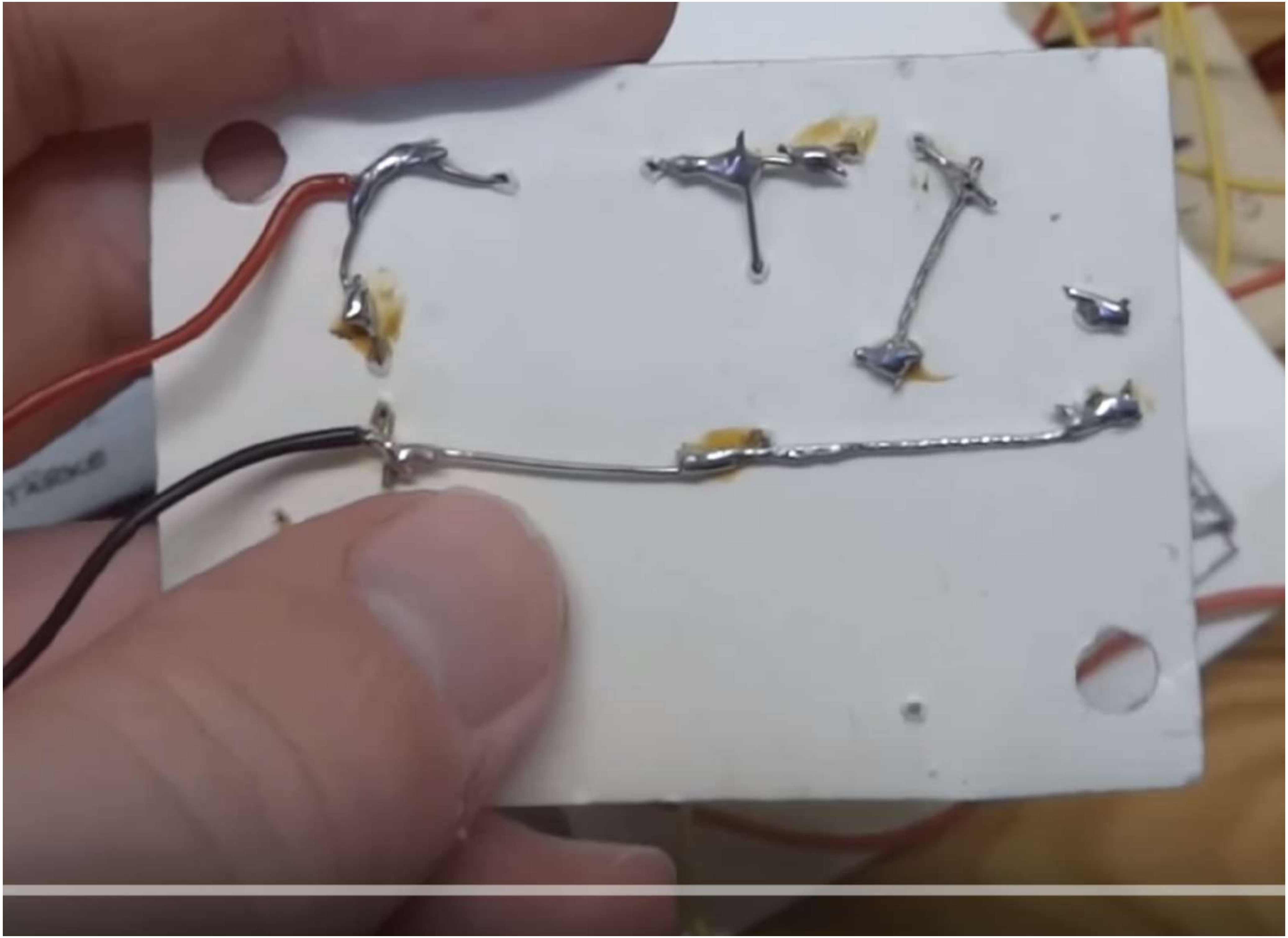

0:53 / 5:27


"Dummy" LOAD
(FOR HW-20 PAWNEE)
RESISTANCE
IN
PARALLEL
DUMMY LOAD
50 OHMS
20 WATTS
3:47 / 5:27


LSL
LSR
SIGNALSTÄRKE
((STEREO))
LEVEL - INDIKATOR
203

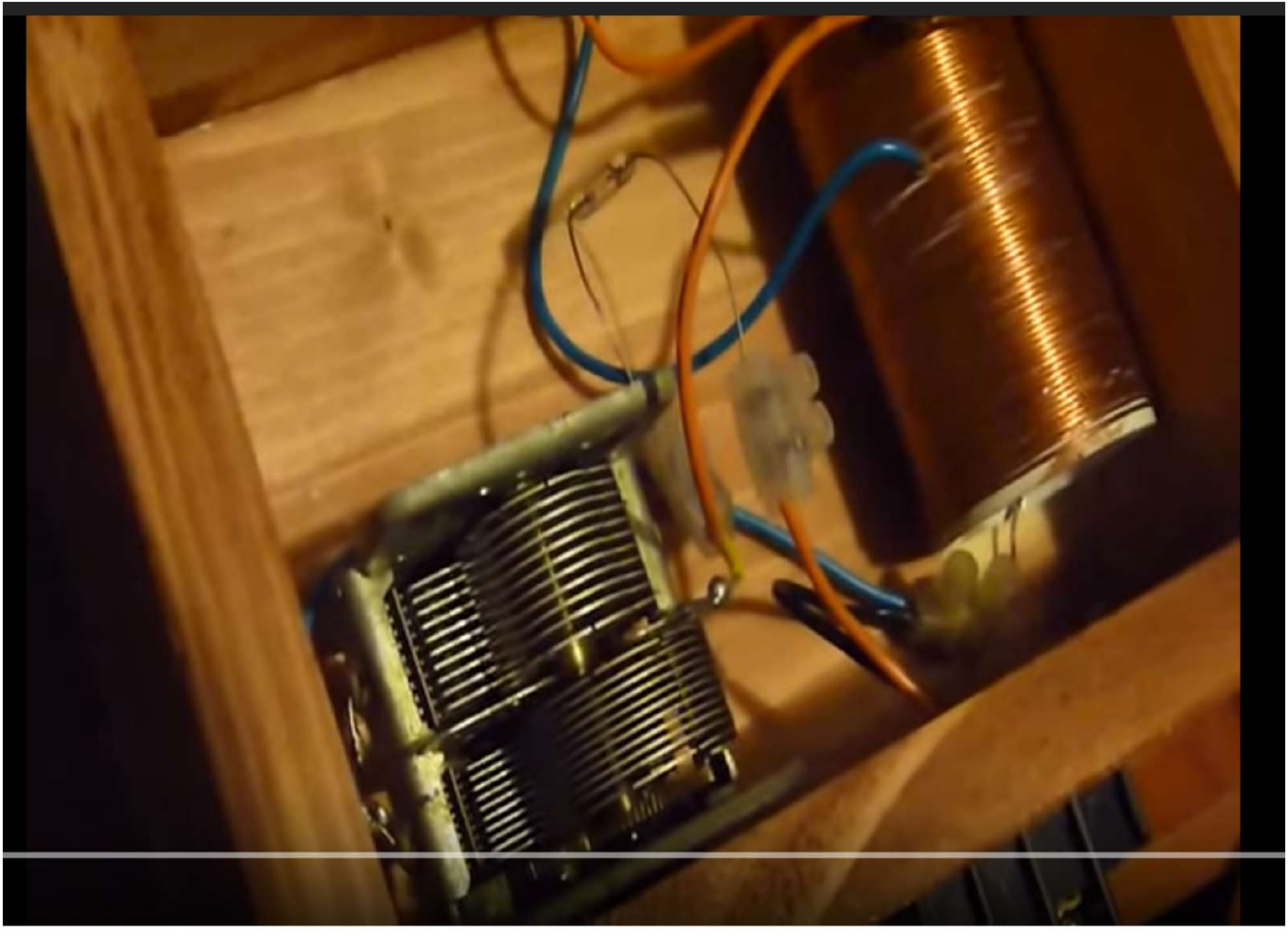


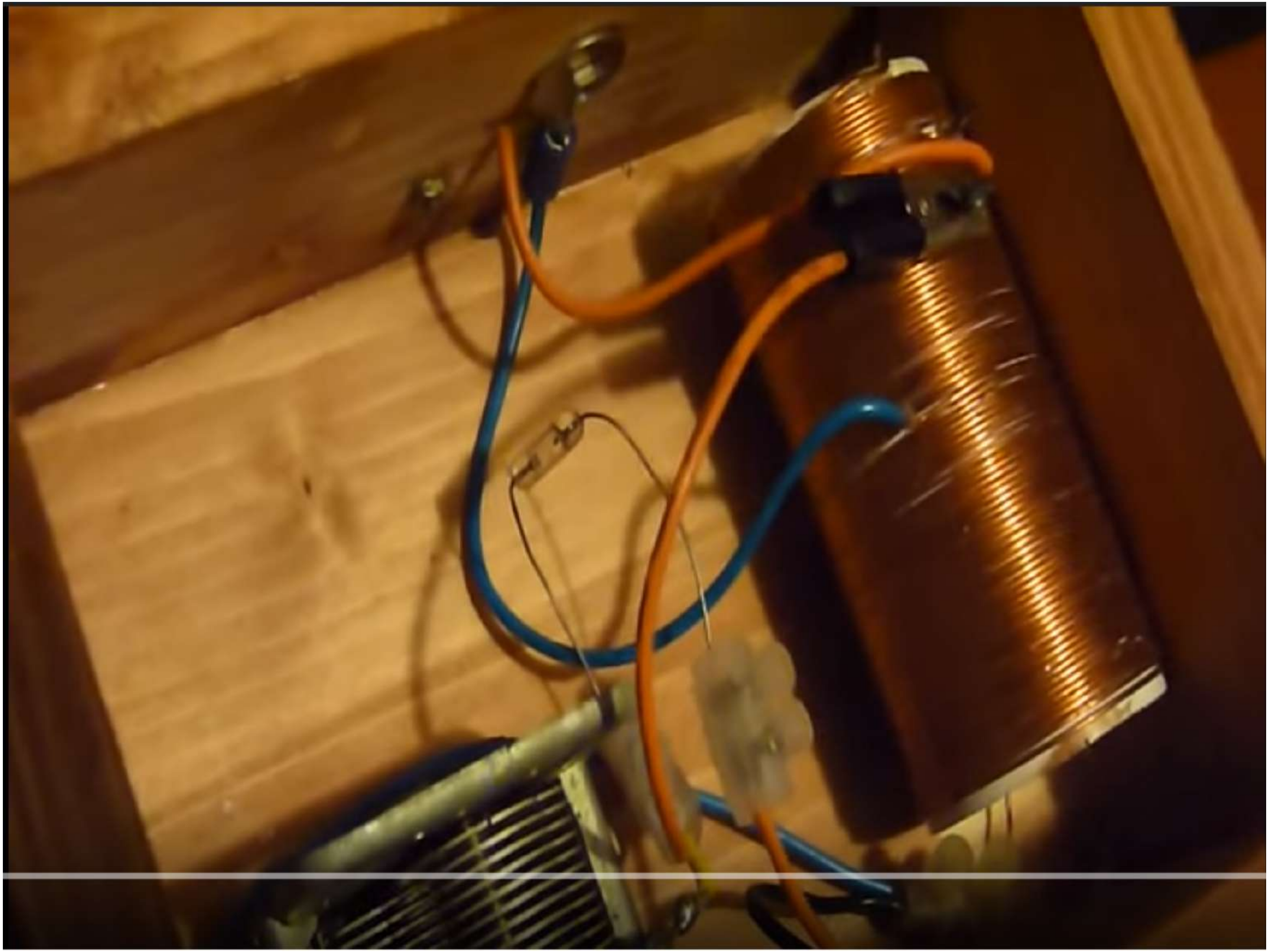
max
LS
min
Signal
Stärke
LEVEL INDICATOR
Vorspannung

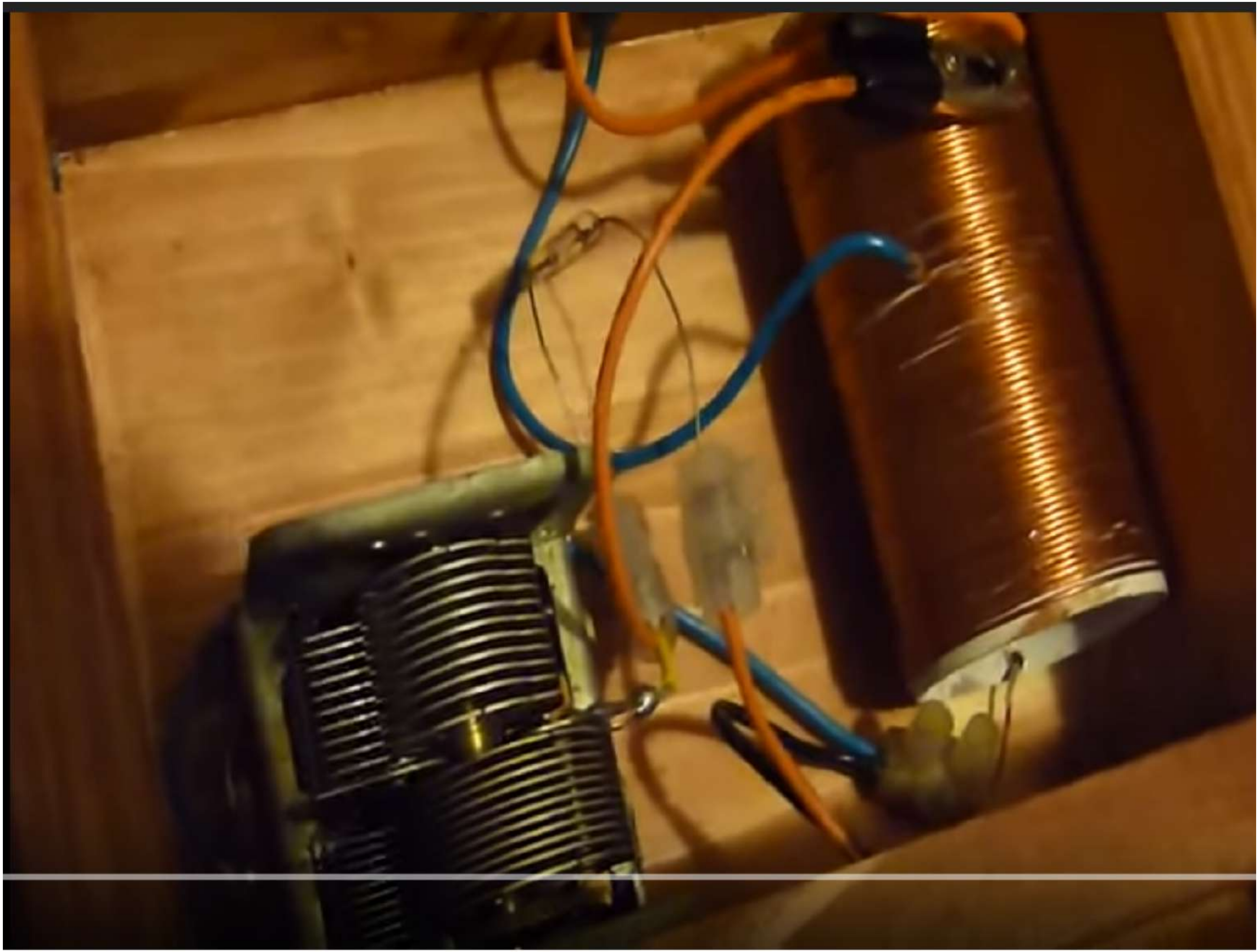


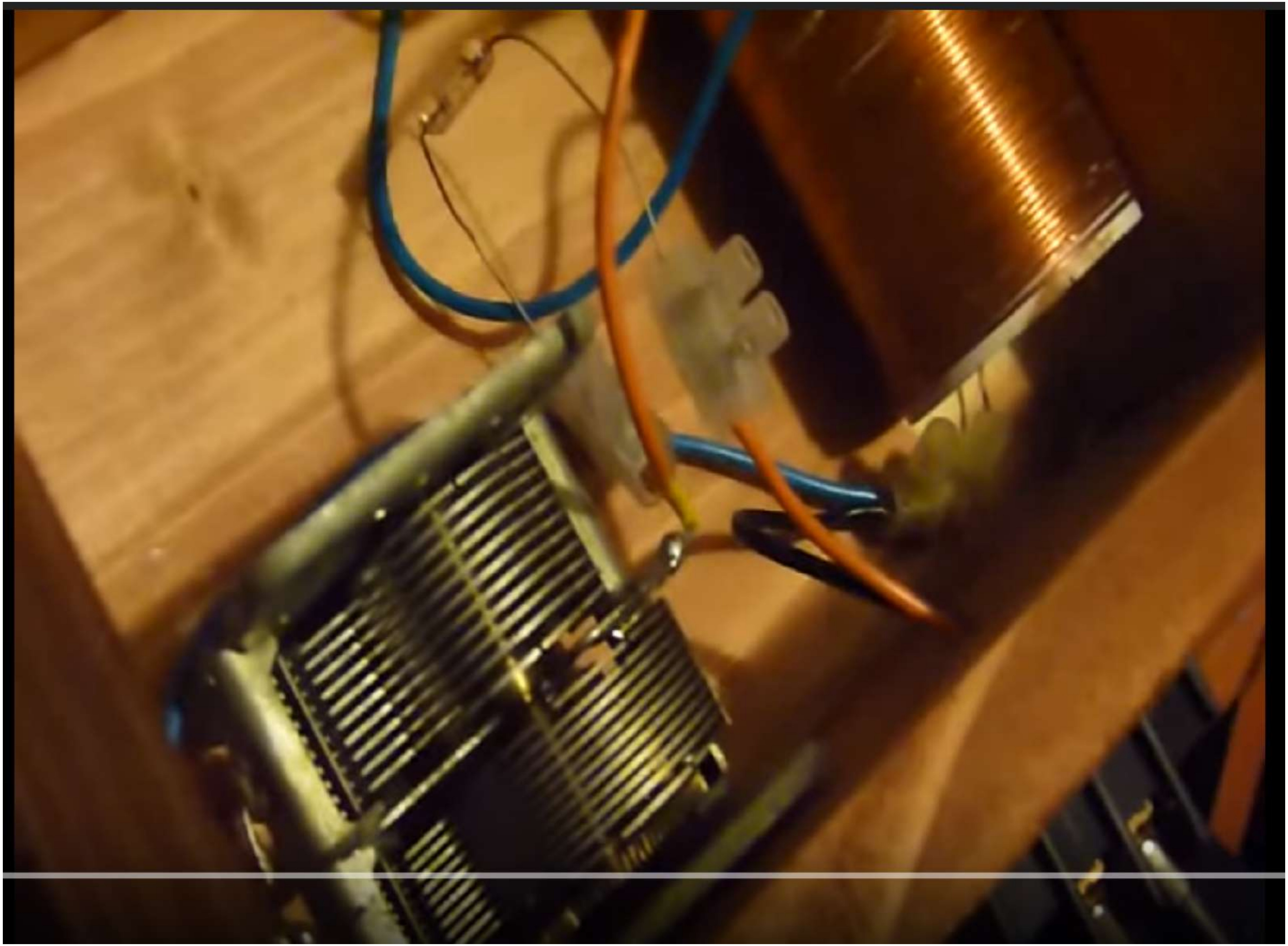
Radio a galena

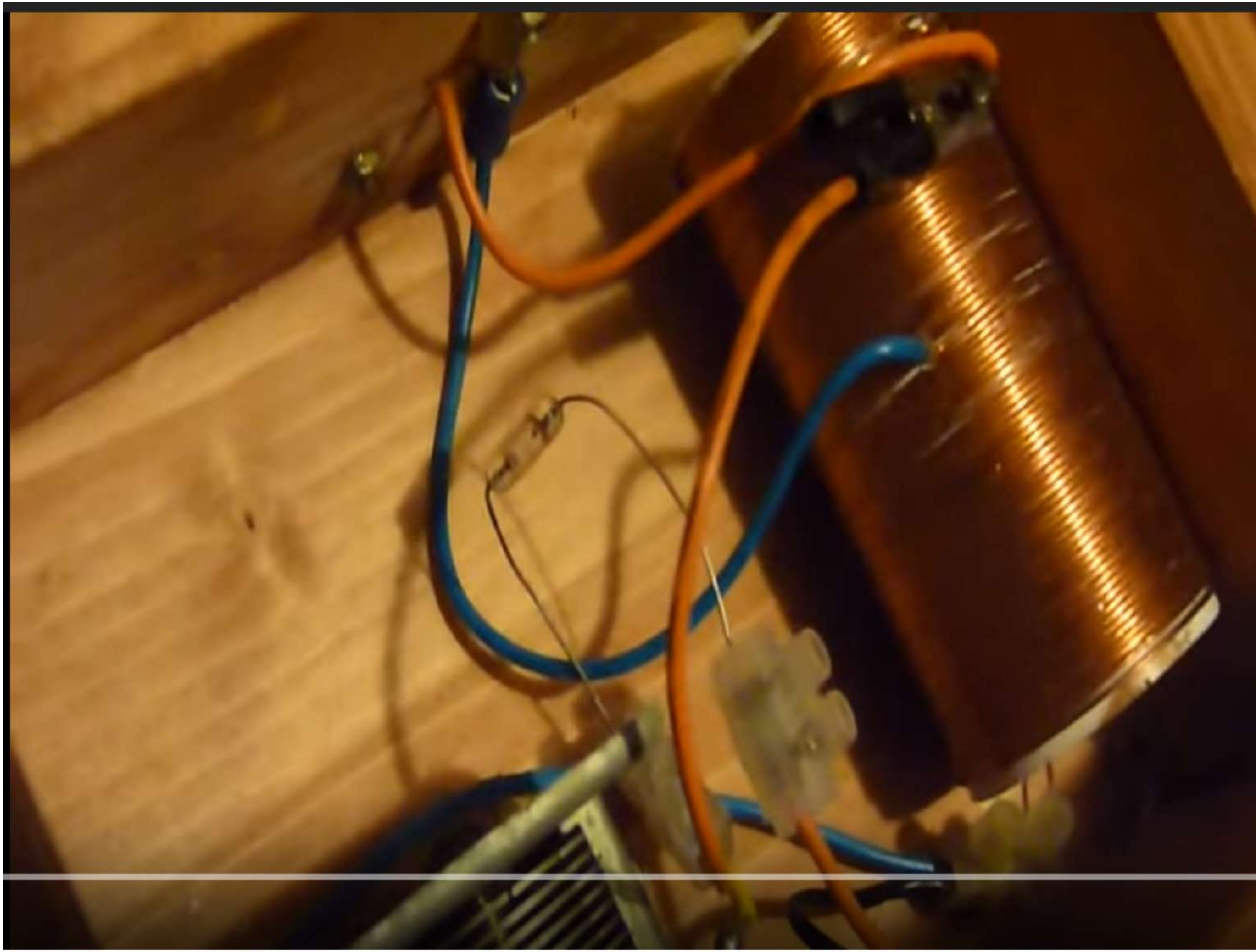
Up next

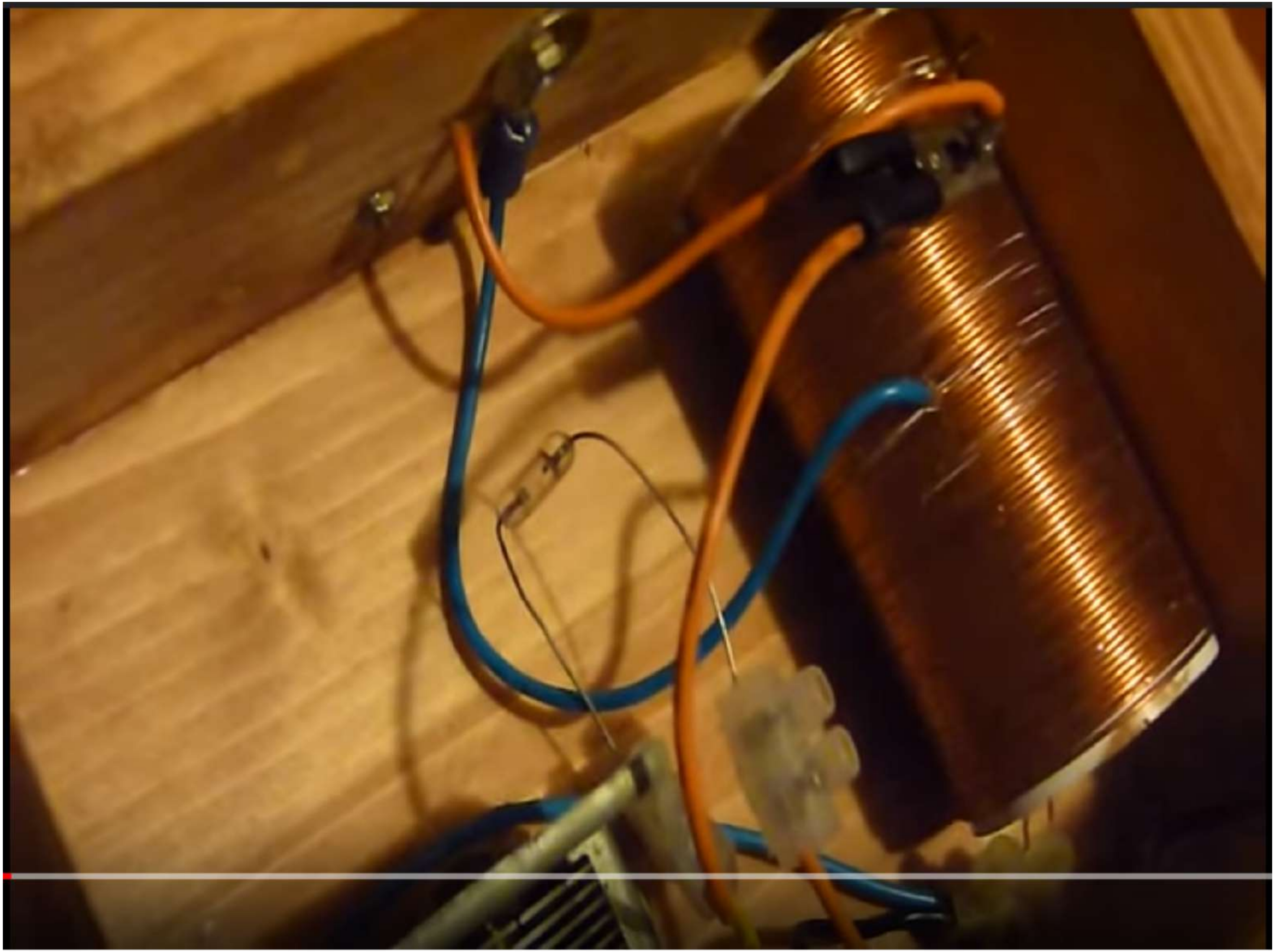


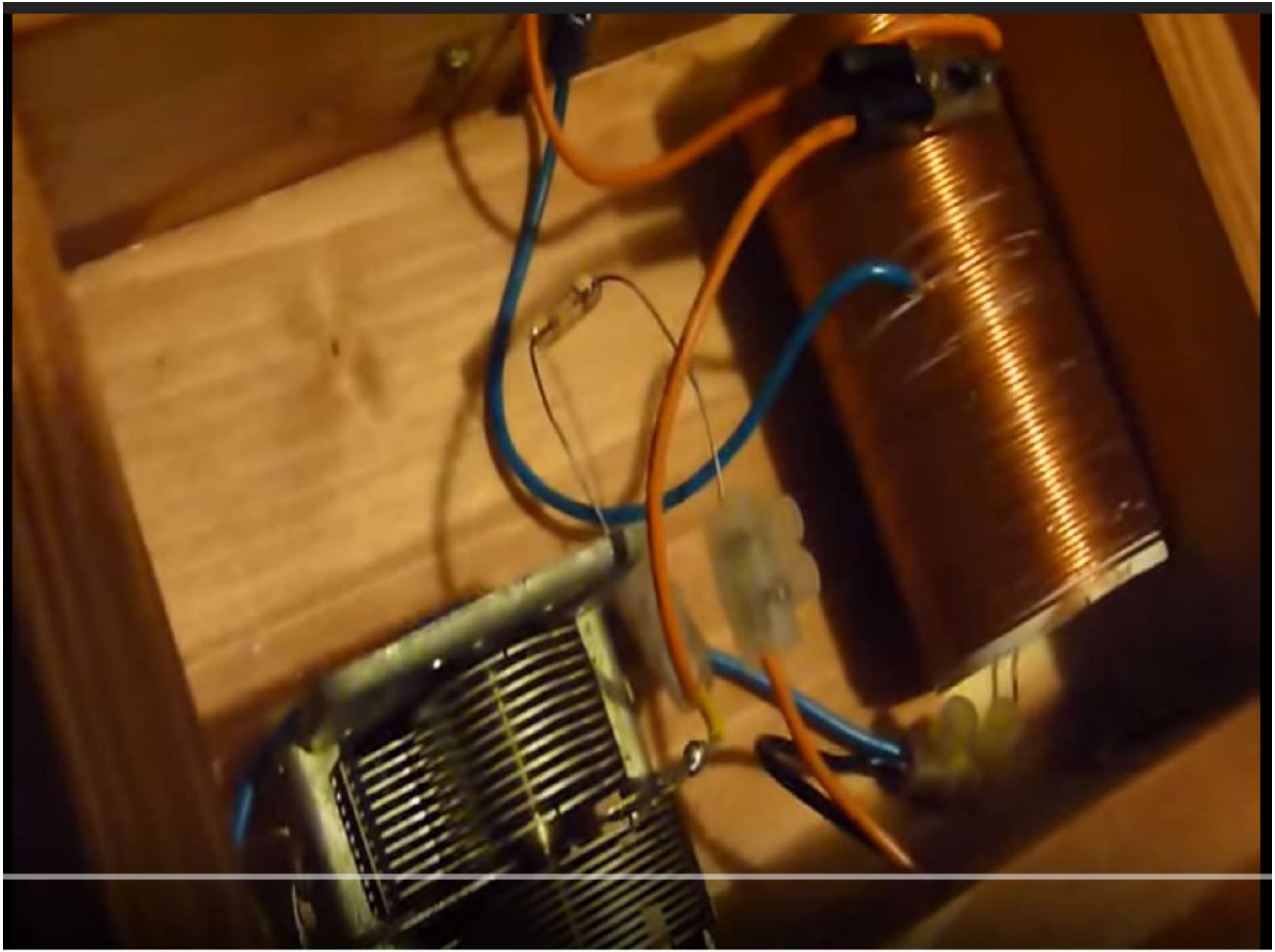


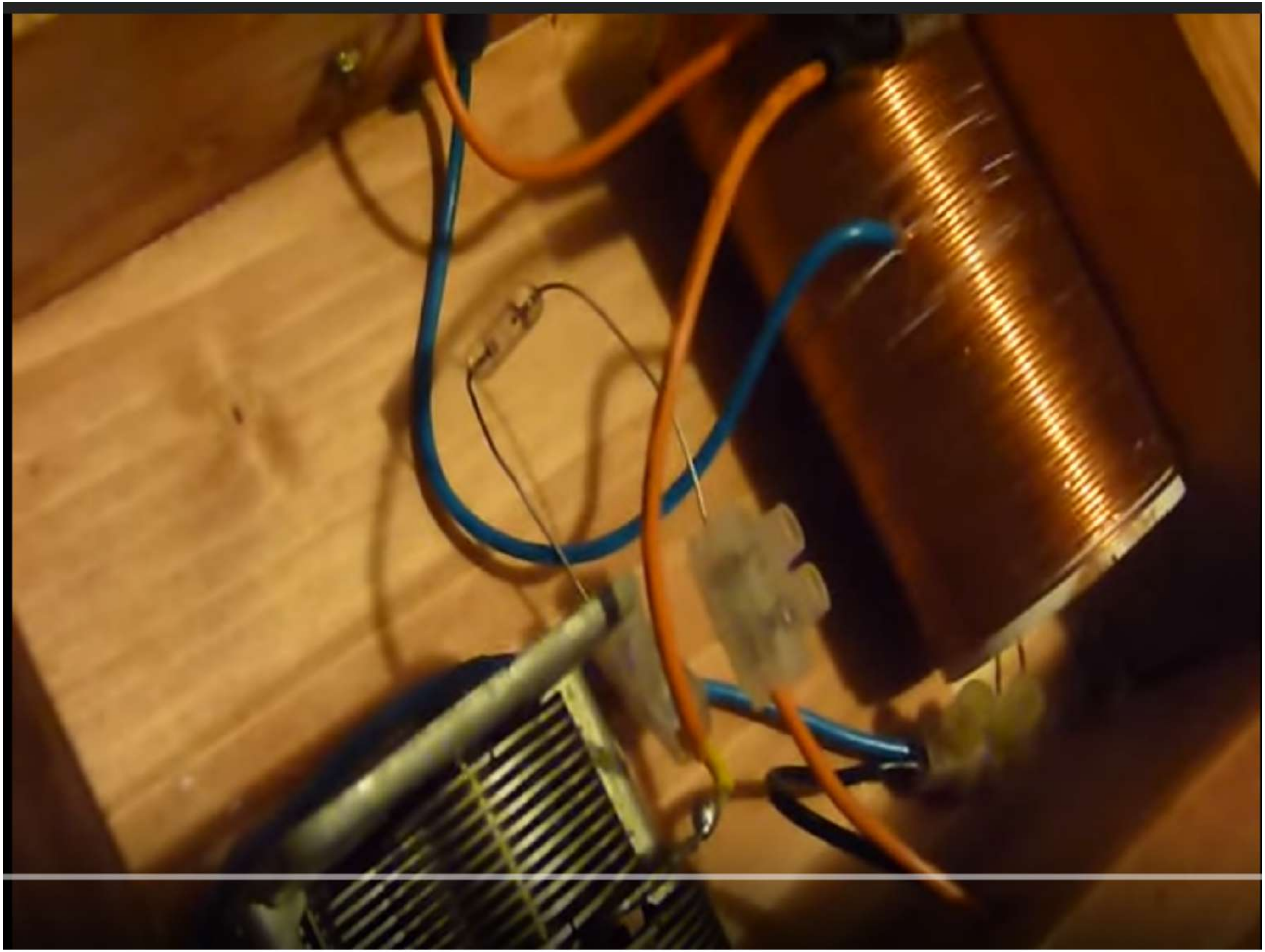


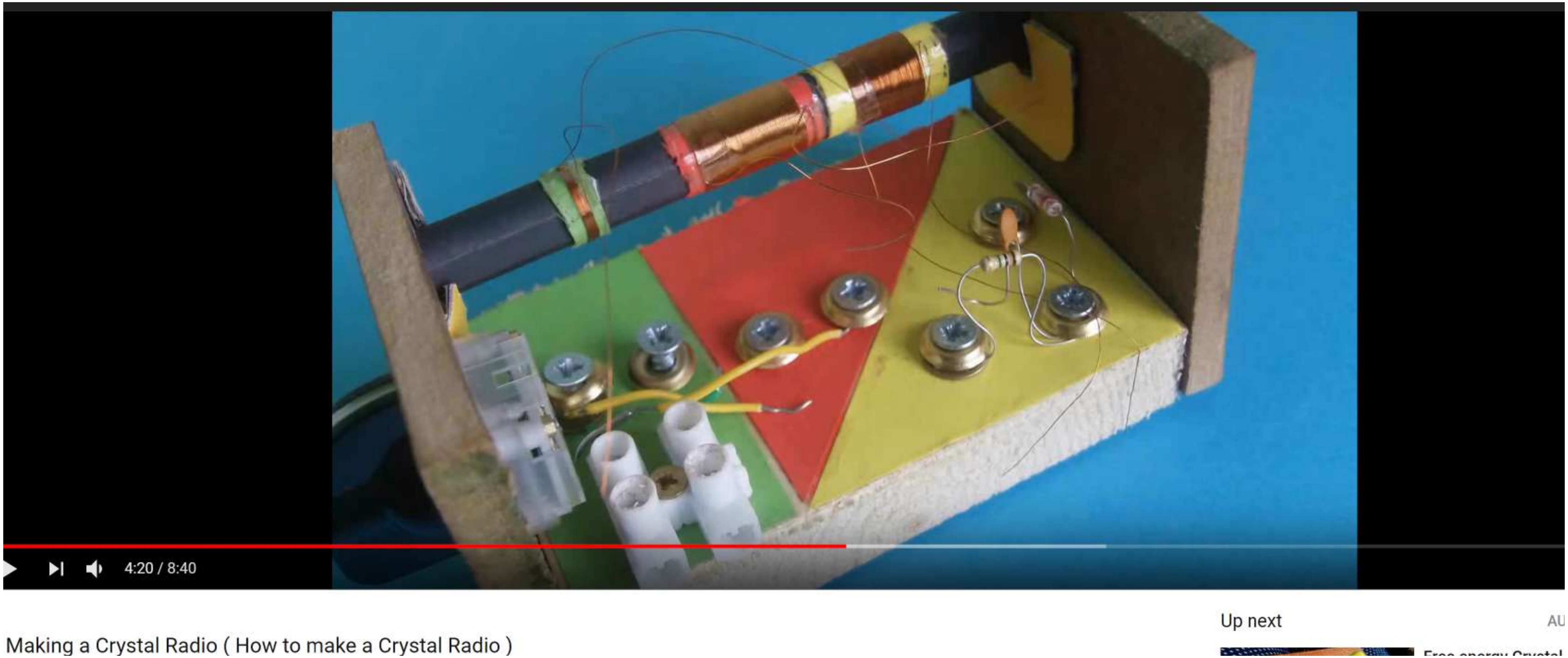


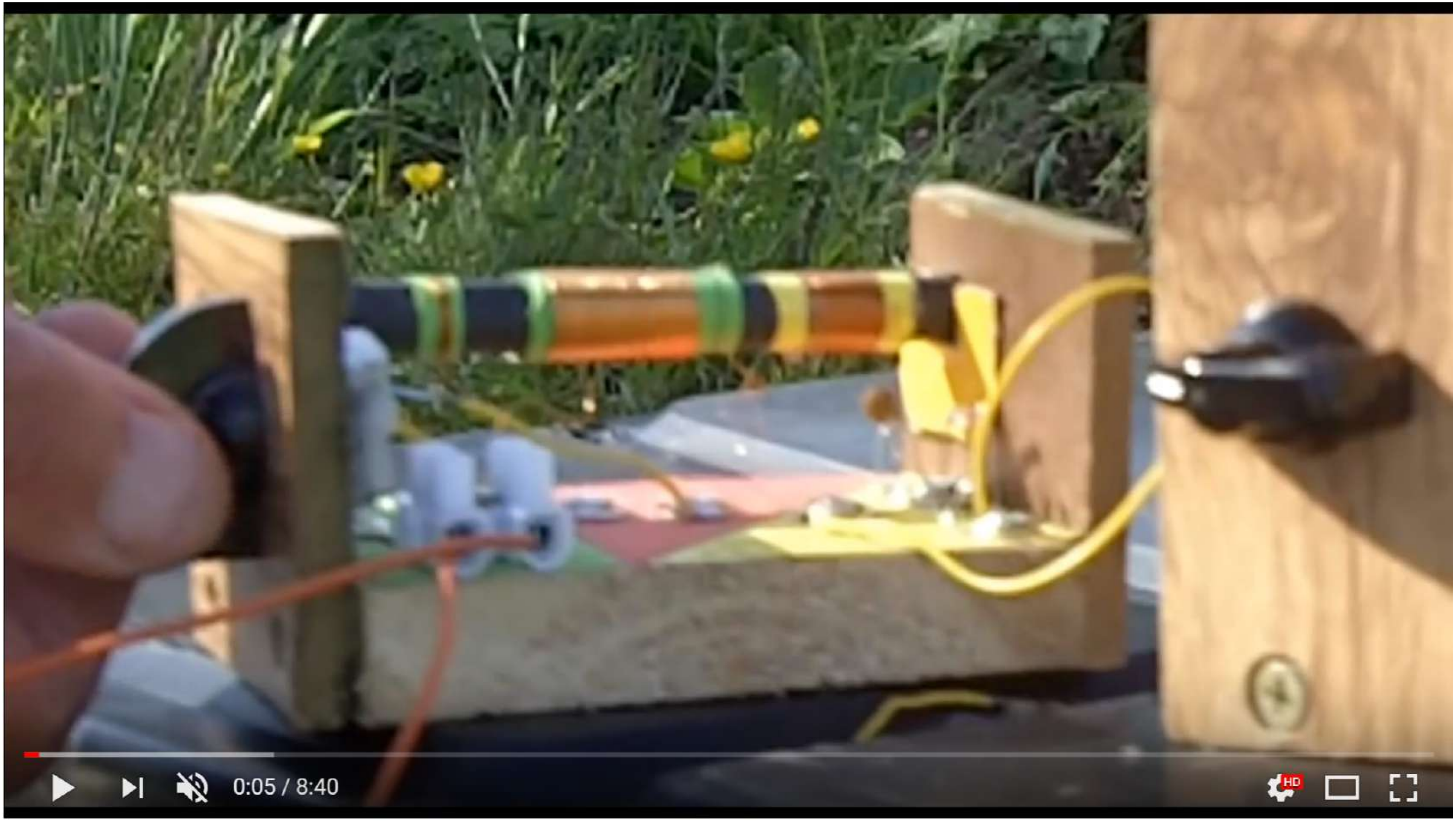


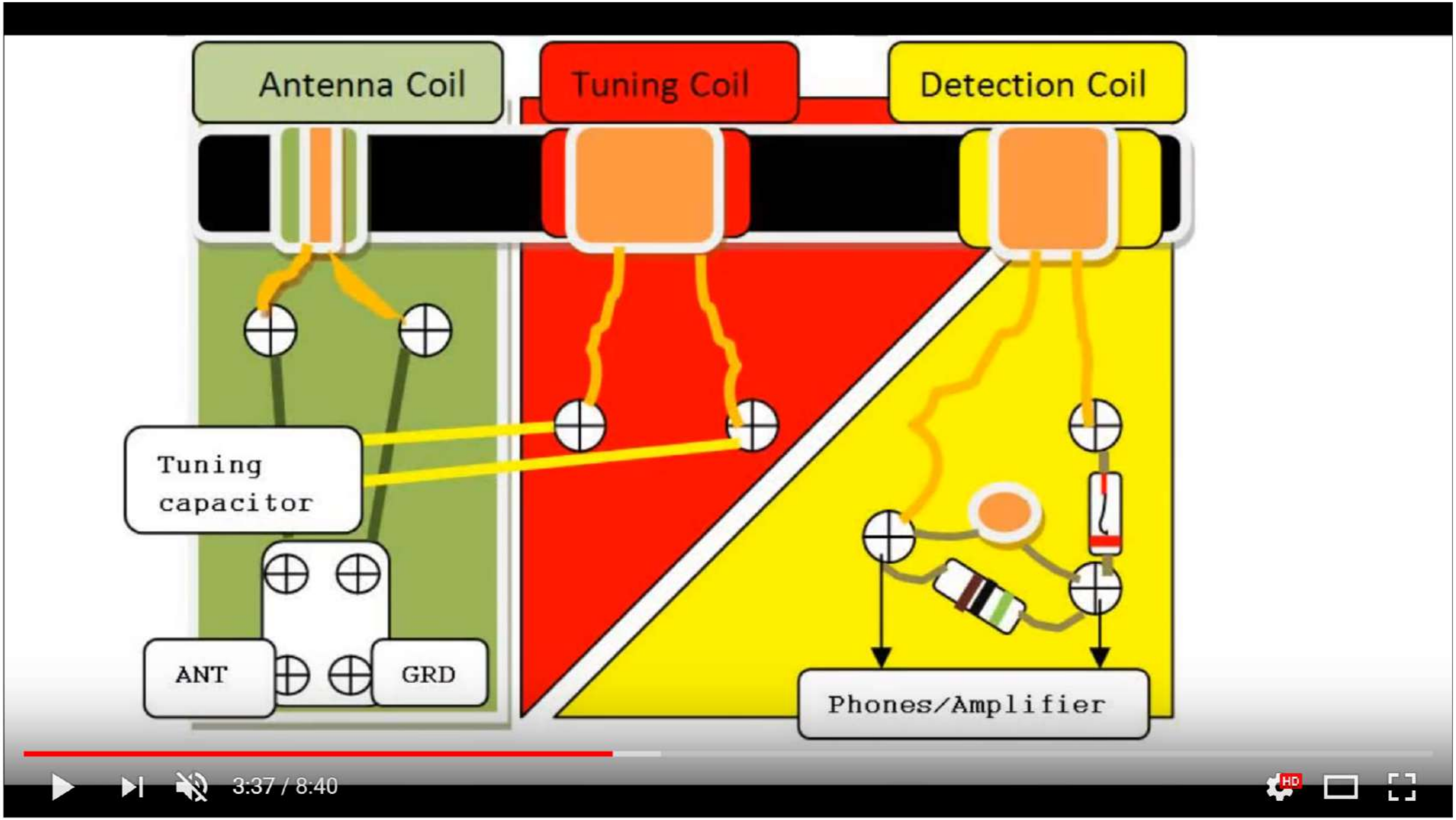


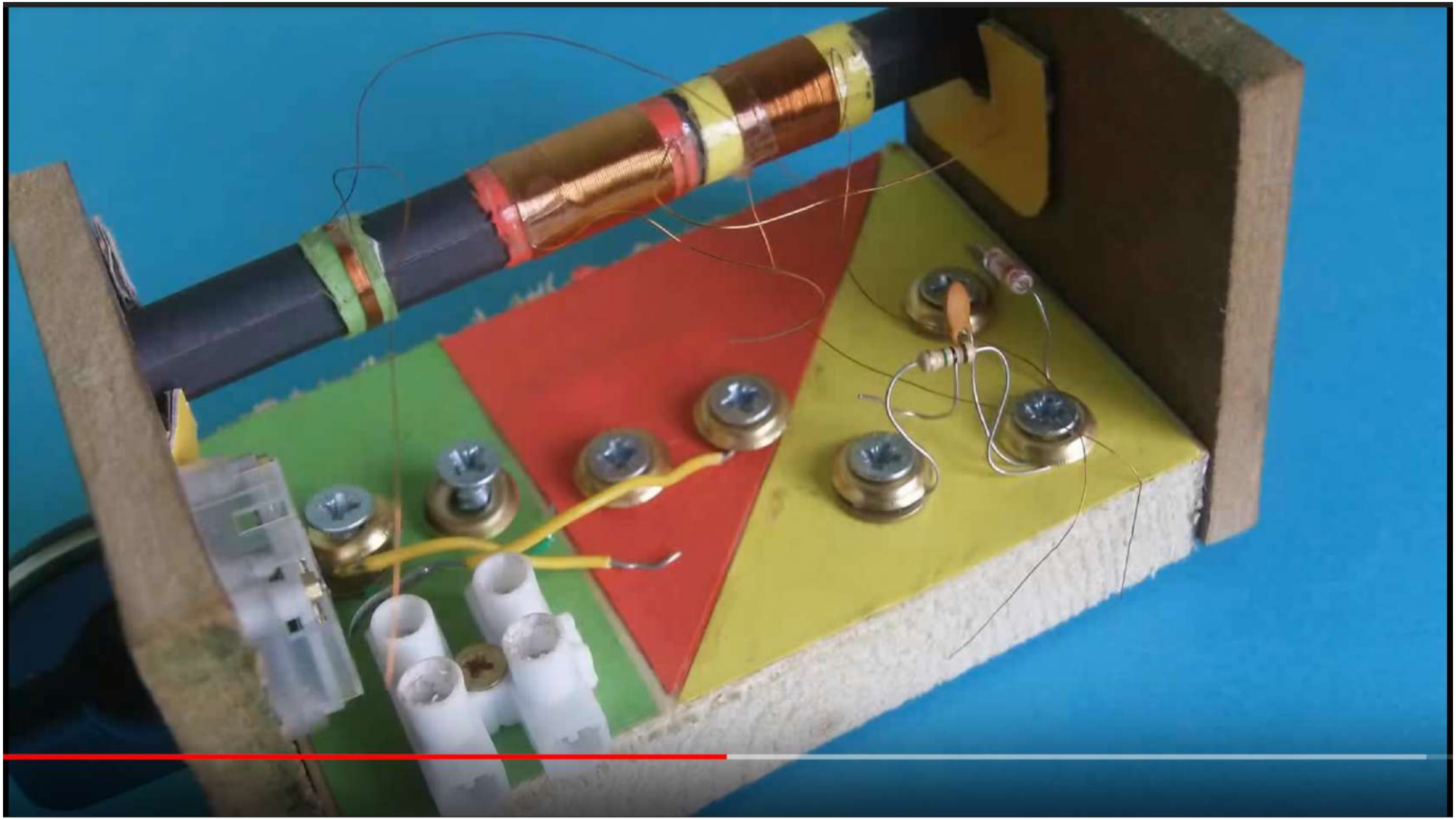





4:20 / 8:40
Making a Crystal Radio (How to make a Crystal Radio)
Up next

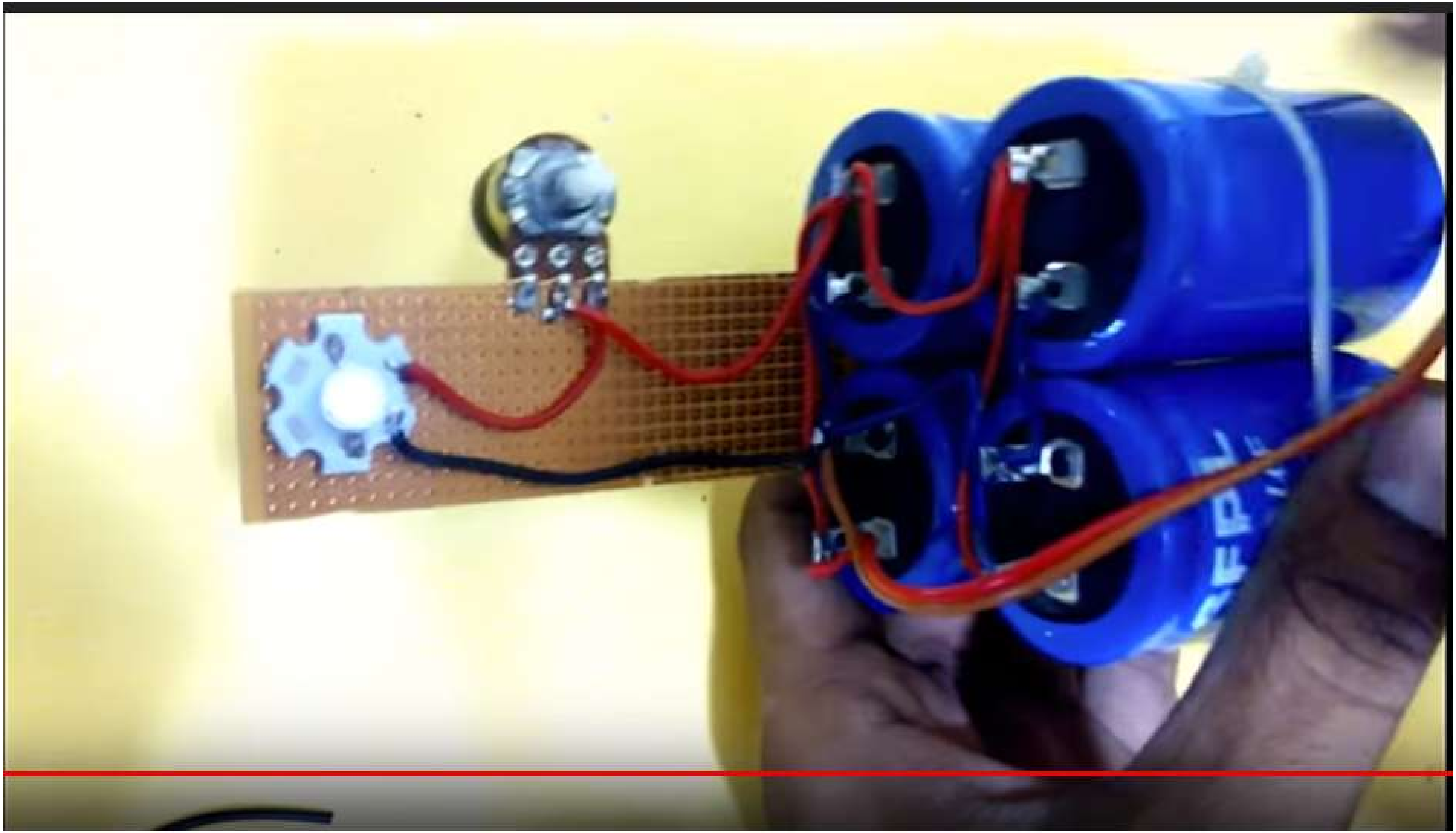

0:05 / 8:40
HD


Antenna Coil
Tuning Coil
Detection Coil
Tuning capacitor
ANT
GRD
Phones/Amplifier
3:37 / 8:40



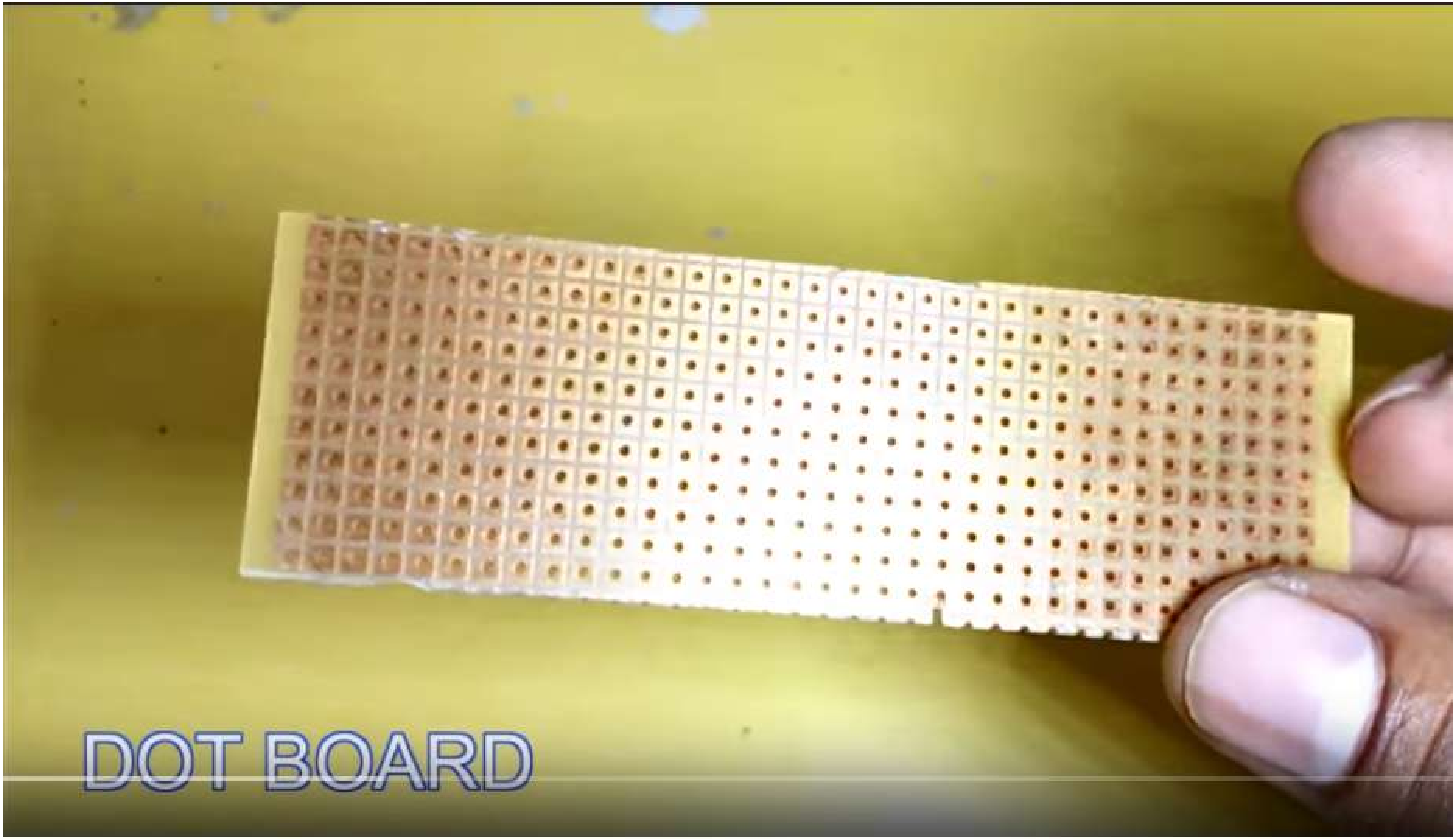

fix tip of coil end to
base with tape

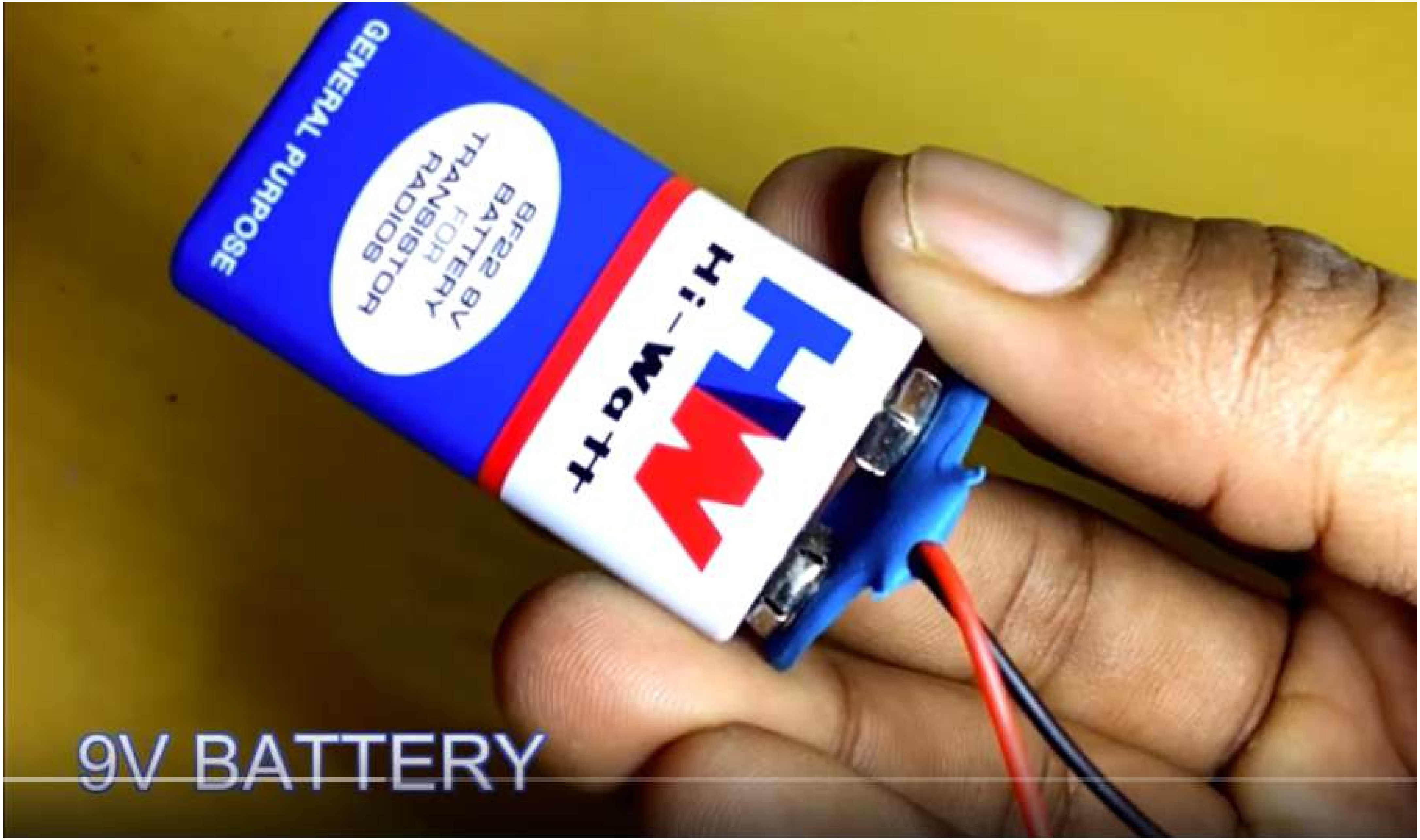

inspired by
Making a Transistor Radio
Ladybird Books
1972



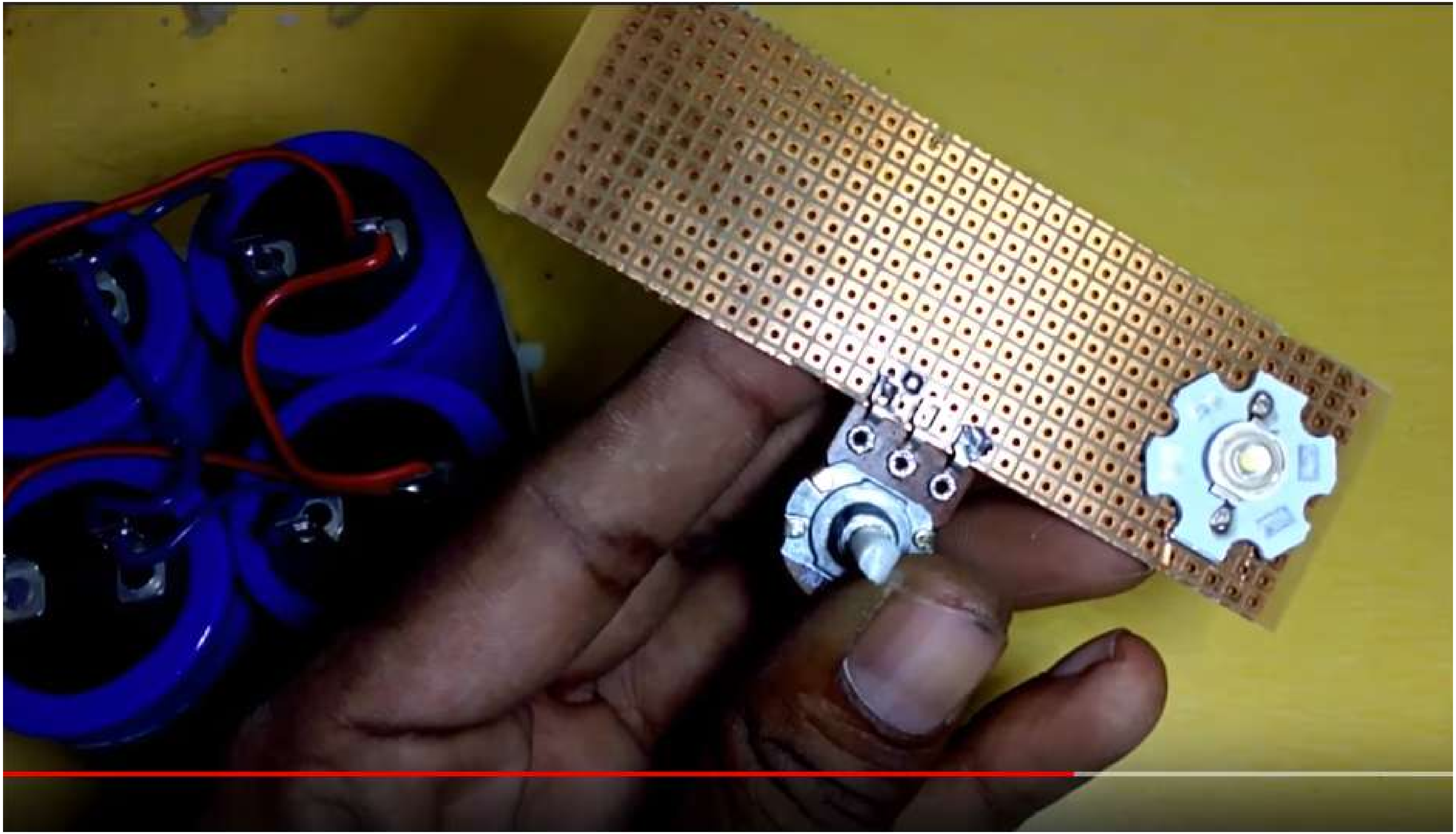

5000µF
50 vdc
105°C
-10 + 10%
(Black Neg.)
5000MFD/50V

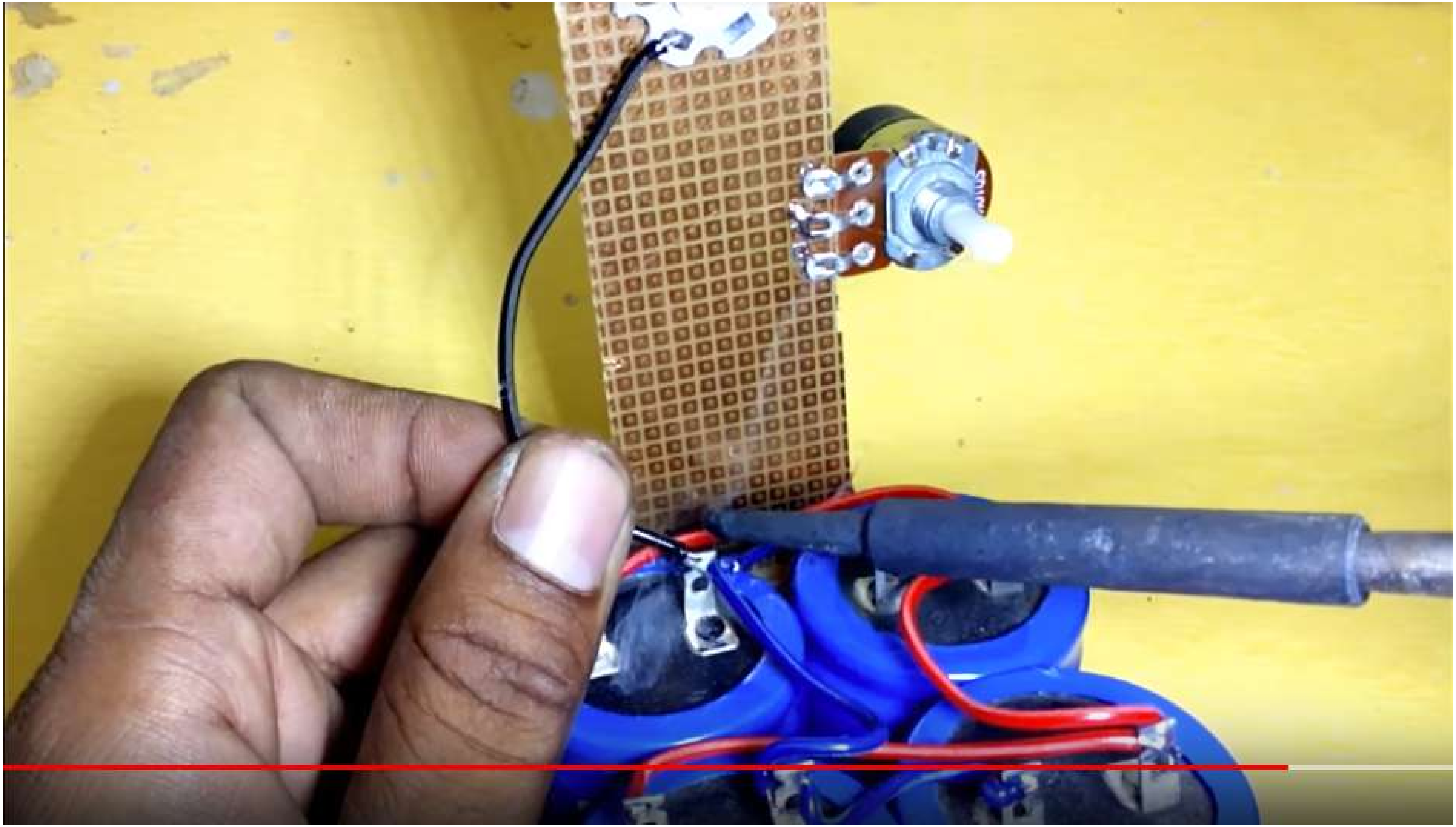

10K V.C

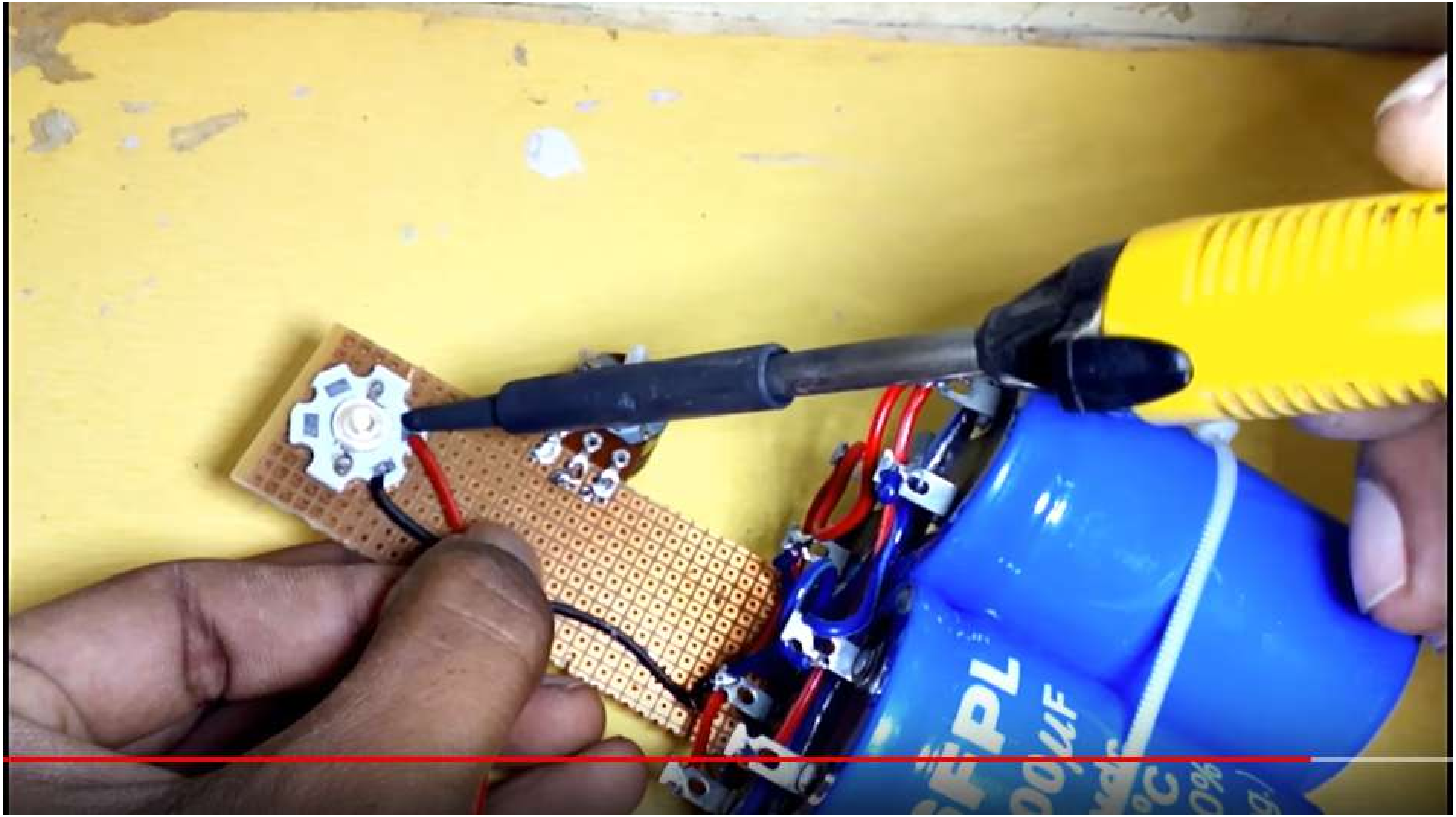

DOT BOARD

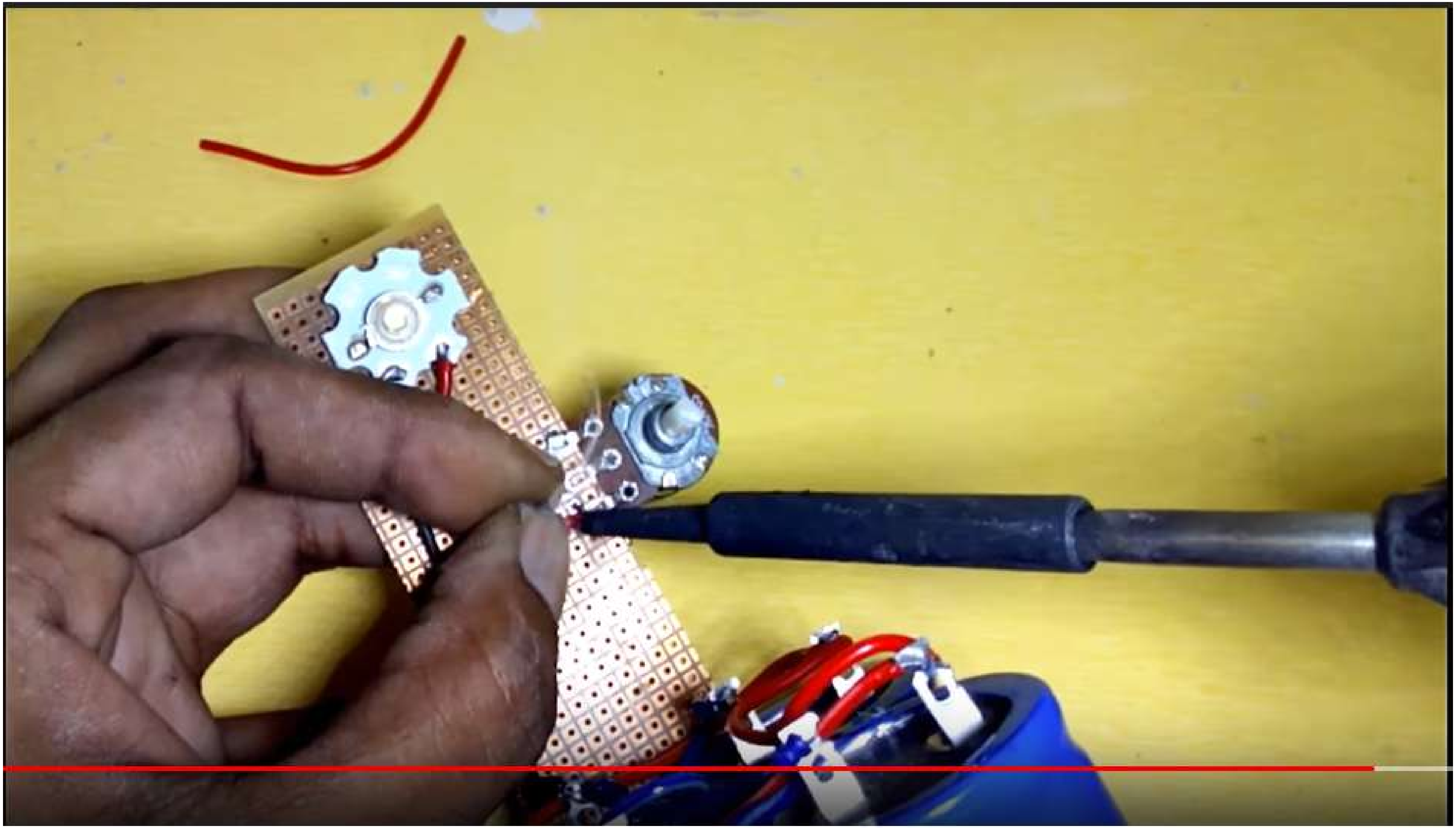

GENERAL PURPOSE
6F22 9V BATTERY FOR TRANSISTOR RADIOS
Hi-watt
9V BATTERY

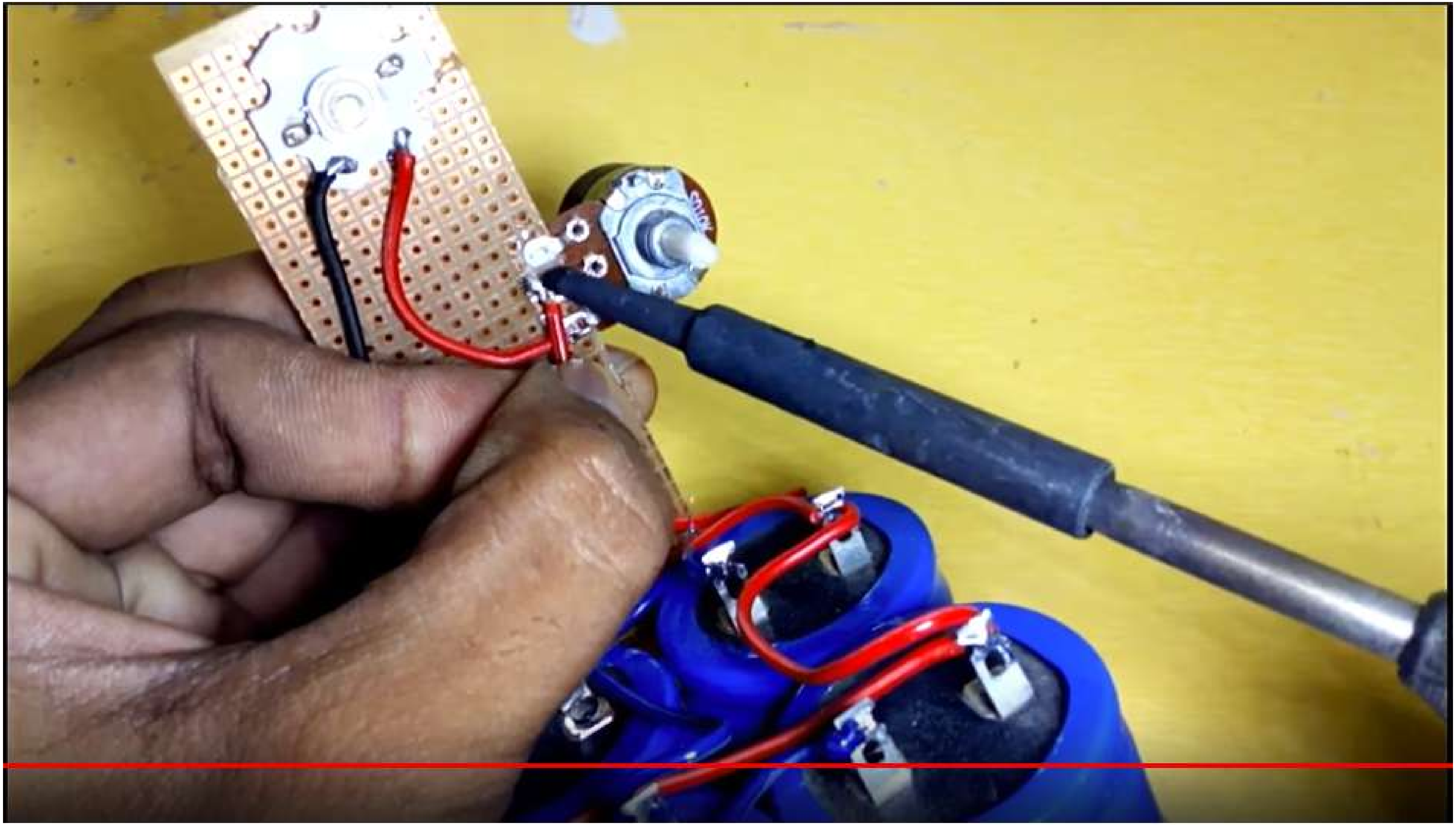

3V LED

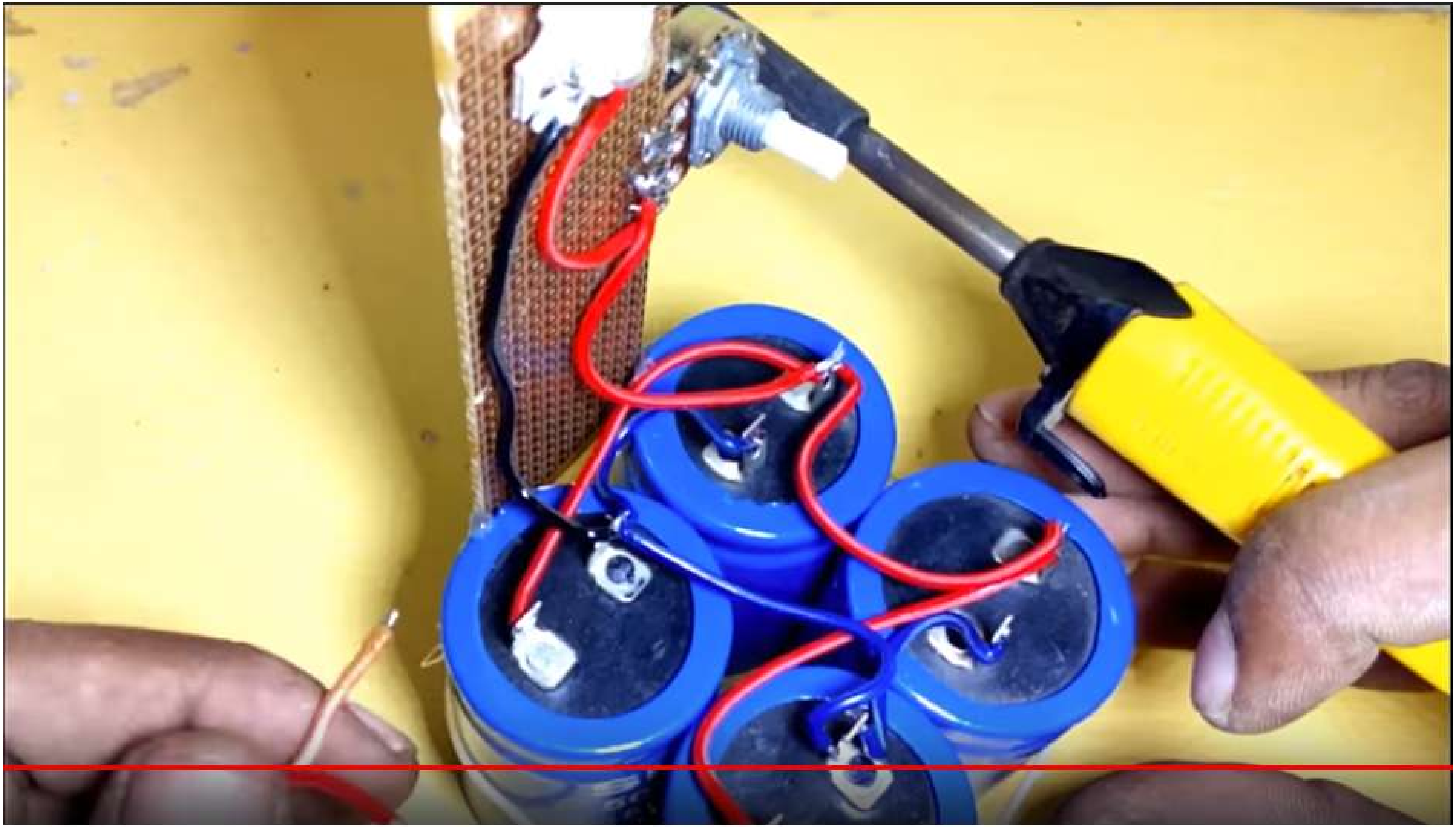


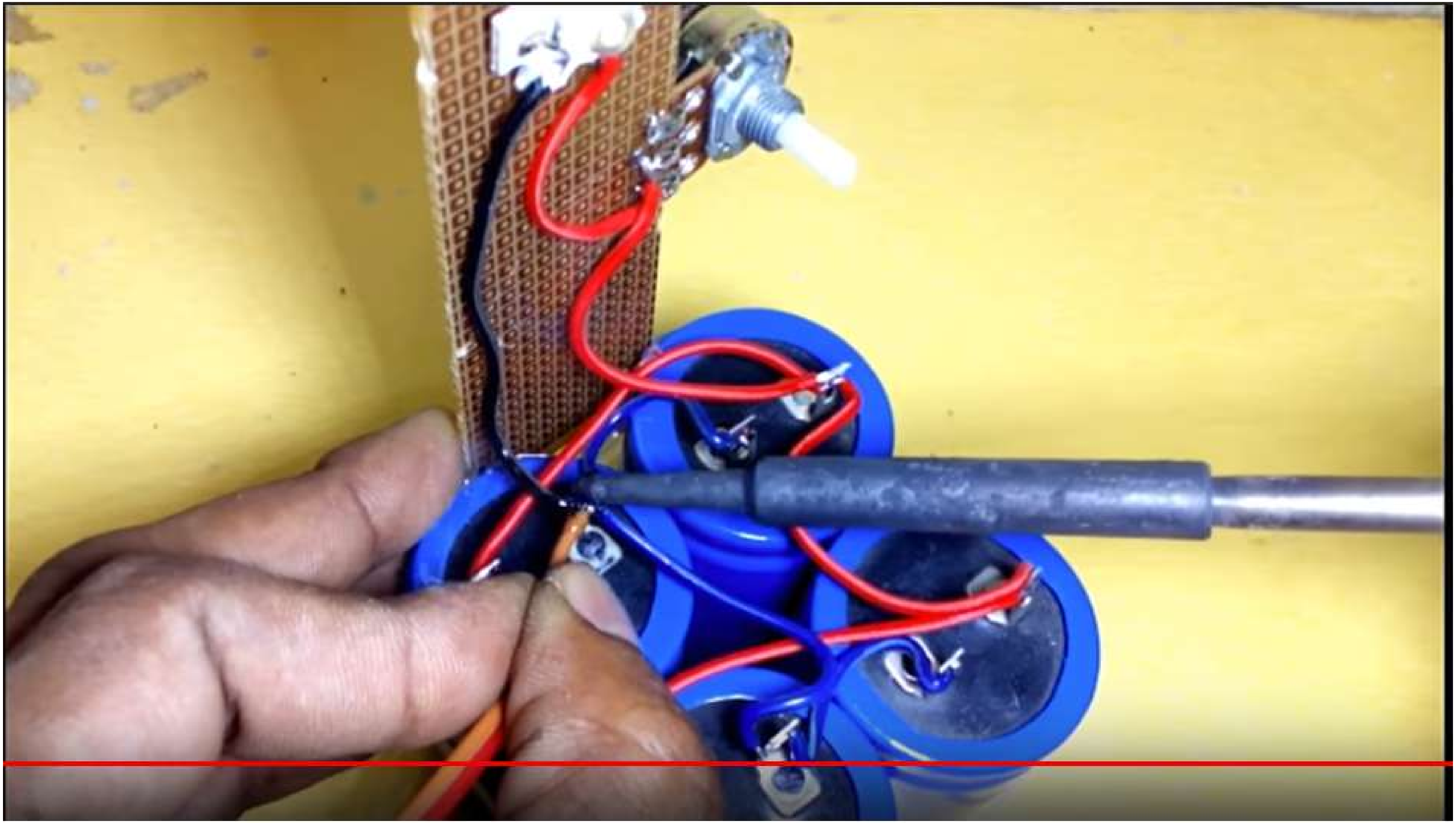


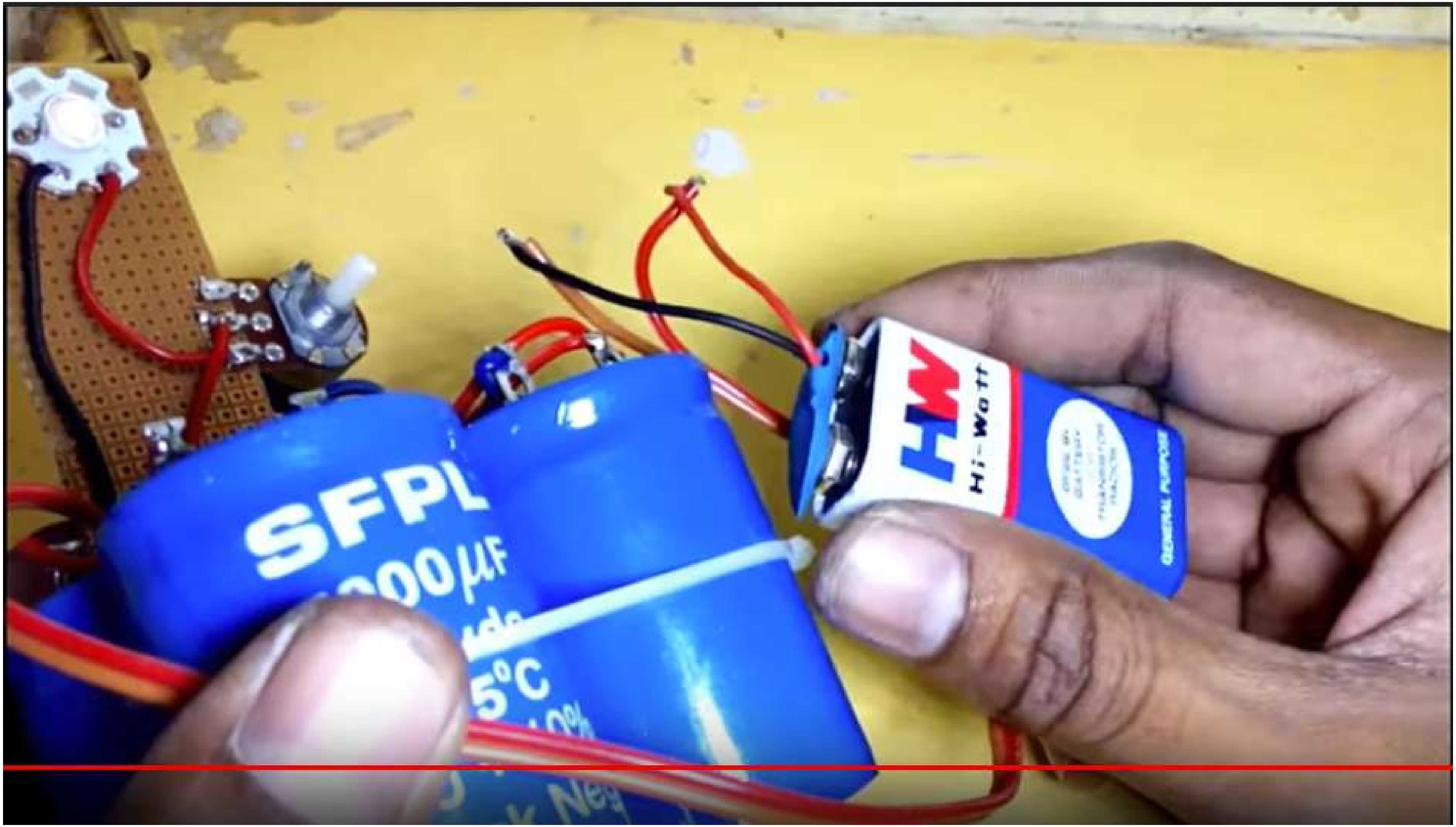


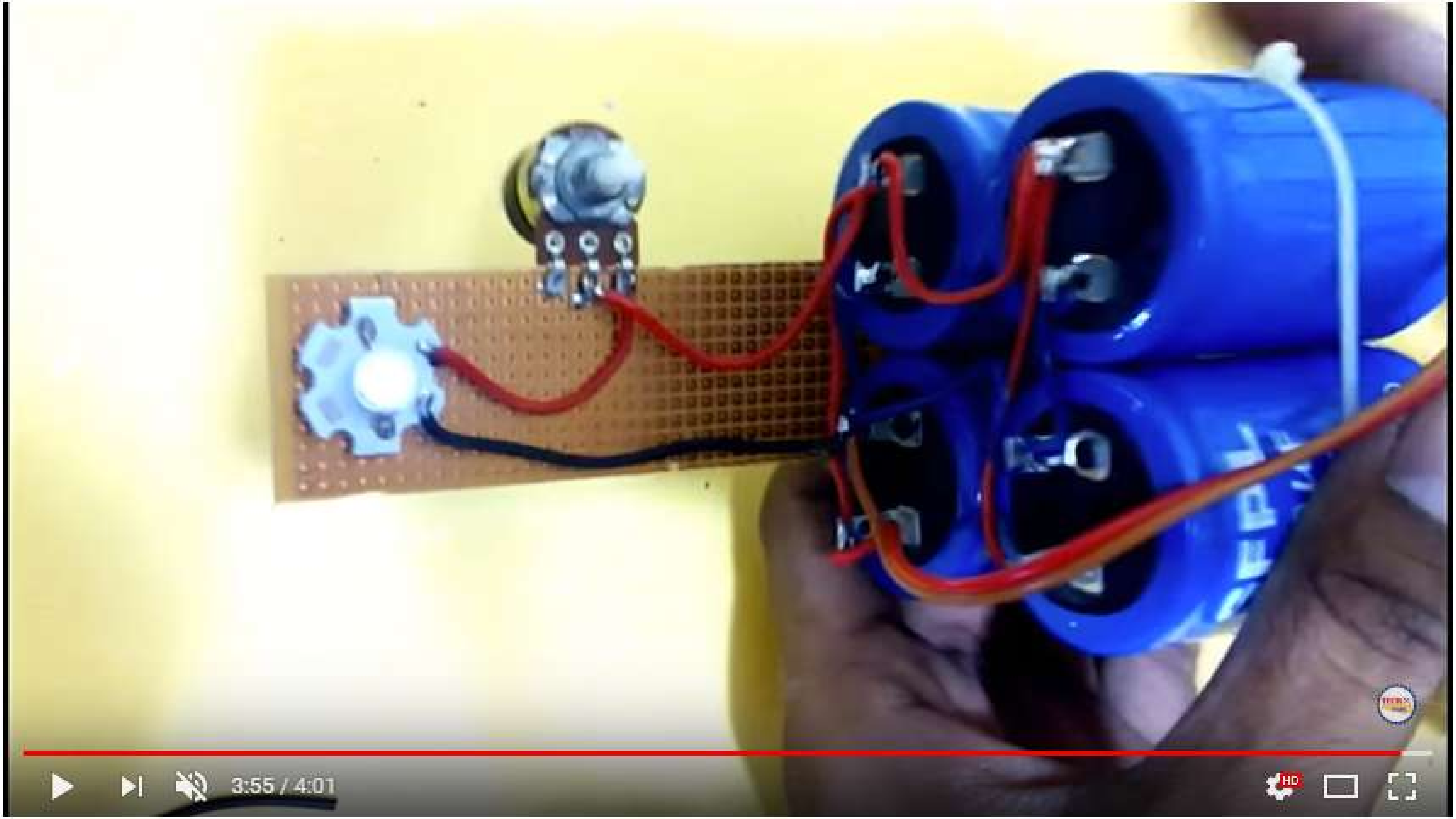









SFPL
HW
Hi-Watt
GENERAL PURPOSE



Real free energy using capacitor 1000% working